

STUDENTS' VOCABULARY ACHIEVEMENT IN USING
CONTEXTUAL REDEFINITION STRATEGY FOR PHARMACY
CLASS

*PENCAPAIAN KOSAKATA MAHASISWA DALAM
MENGUNAKAN STRATEGI MENDEFINISIKAN KEMBALI
SECARA KONTEKSTUAL UNTUK KELAS FARMASI*

ANDI SAMSURIJAL



**POST GRADUATE PROGRAM
HASANUDDIN UNIVERSITY
MAKASSAR
2013**

STUDENTS' VOCABULARY ACHIEVEMENT IN USING
CONTEXTUAL REDEFINITION STRATEGY FOR PHARMACY
CLASS

A Thesis

Submitted to fulfillment of the requirements for degree of Magister
Humaniora

Program

English Language Studies

Arranged and Proposed by

ANDI SAMSURIJAL

To

POSTGRADUATE PROGRAM

HASANUDDIN UNIVERSITY

MAKASSAR

2013

A THESIS
STUDENTS' VOCABULARY ACHIEVEMENT IN USING
CONTEXTUAL REDEFINITION STRATEGY FOR PHARMACY
CLASS

Written and Submitted by:

ANDI SAMSURIJAL

Register Number: P0600211408

Has been defended in front of the Thesis Examination Committee
on 13th November 2013 and has fulfilled the requirements

Approved by

The Supervisory Committee

<hr style="width: 80%; margin: 0 auto;"/> <p>Prof. Dr. Abdul Hakim Yassi, Dipl. TESL, M.A. Head</p>	<hr style="width: 80%; margin: 0 auto;"/> <p>Prof. Dr. H. Hamzah A.Machmoed, M.A. Member</p>
---	--

Person in Charge of
Head of ELS Program

Director of Postgraduate Program
of Hasanuddin University

Prof. Drs. H. Burhanuddin Arafah, M.Hum., Ph.D

Prof. Dr. Ir. Mursalim

PERNYATAAN KEASLIAN TESIS

Yang bertanda tangan di bawah ini

Nama : Andi Samsurijal

Nomor Mahasiswa : PO600211408

Program Studi : Bahasa Inggris

Menyatakan dengan sebenarnya bahwa tesis yang saya tulis ini benar-benar merupakan hasil karya saya sendiri, bukan merupakan pengambilalihan tulisan atau pemikiran orang lain. Apabila dikemudian hari terbukti atau dapat dibuktikan bahwa sebagian atau keseluruhan tesis ini hasil karya orang lain, saya bersedia menerima sanksi atas perbuatan tersebut.

Makassar, 13 November 2013

Yang menyatakan

Andi Samsurijal

ACKNOWLEDGMENT

Bismillahi Rahmani Rahim

Alhamdulillah Rabbil Alamin. All praises and thanks are due to Allah SWT, Who abundantly offered me health, strength, and knowledge. Praise and invocation are also given to our great Messenger, Muhammad SAW, who has brought us from the darkness to the lightness.

In writing this thesis, I realize that I have been helped and given motivation and spirit by many people. Therefore, I would like to express my deep gratitude and sincere thanks to all of them. So for this time the writer owes deep gratitude to my supervisors: Prof. Dr. Abd. Hakim Yassi, Dipl. TESL, M.A., and Prof. Dr. H. Hamzah A. Machmoed, M.A., whose endless guidance and insightful assistances helped me throughout the writing of this research. Special thanks go to the examiner team Dr. H. Mustafa Makka, M.S., Dr. Hj. Sukmawaty, M.Hum. Dr. H. Sudarmin Harun, M.Hum., and all the lecturers who taught me throughout the postgraduate program, whose lectures are sources of my professional development.

I would also like to thank to my fellow graduates in ELS 2011; Mustari *et.al*, for their assistances and considerable recommendations for this study. Additional thanks go to the Rector of Makassar Islamic University, Dean of Faculty of Letters Makassar Islamic University thanks for the recommendation and goes to the Dean of Mathematics and Natural Sciences Faculty and pharmacy students of Makassar Islamic University

academic year 2012/2013 who actively participated in this study. I would also like to thanks to Syamsuddin Simmau, A. Muh. Irawan, Mursidah Gazali, Warsidi, Abd. Rahman, Chairil Imran and Masdin who willingly shared their times, knowledge and experiences with me.

My heartfelt thanks and a special debt of gratitude goes to my family: my beloved wife Muthmainnah, S.S., to my father, the persistent Nur Alam, and my late beloved mother Muliati, my brothers Alimuddin and Asdar, for their loves and supports. I would like to thank all people who took part in achieving this work that I cannot mention one by one.

May the Almighty Allah SWT always bless us in every step we make. Amiin. Wassalam.

Makassar, 13 November 2013

Andi Samsurijal

ABSTRACT

A.SAMSU RIJAL. *Students' Vocabulary Achievement in Using Contextual Redefinition Strategy for Pharmacy Class* (supervised by Abd. Hakim Yassi and Hamzah A. Machmoed).

This research is aimed at: (1) finding out how is the contextual redefinition strategy implemented in vocabulary teaching for pharmacy class; (2) investigating whether the contextual redefinition strategy could improve the students' vocabulary achievement; (3) finding out the pharmacy students' attitude on the application of the contextual redefinition strategy.

This research was quantitative method by applying the pure experimental research which carried out in the students of Pharmacy Department, Faculty of Mathematics and Natural Sciences, Makassar Islamic University. Contextual redefinition strategy was taught in MIPA Class A as the treatment group. To find out the improvement of students' vocabulary achievement, the researcher used the pre-test and post-test. Then the data were analysed by using SPSS and t-test.

The research result indicates, first, the procedure in the application of contextual redefinition strategy can lead the students to be independent learners inside and outside of the class, and this strategy can be applied for the class of English for pharmacy. Second, there is improvement of the students' scores after the treatment. Statistically, the mean score for pre test is 36.7667, and the mean score for the post test is 54.1467. This means that the vocabulary teaching through contextual redefinition strategy significantly has the impact on pharmacy students' vocabulary achievement. Third, the pharmacy students give positive attitude on the application of the contextual redefinition strategy and there are 73.3 % of pharmacy students who agree if the English teachers for the Pharmacy English use the strategy to improve the students' vocabulary. The use of contextual redefinition strategy in vocabulary teaching can have the positive impact on the development of the pharmacy students' vocabulary achievement.

ABSTRAK

A.SAMU RIJAL. Pencapaian Kosakata Mahasiswa dalam Menggunakan Strategi Mendefinisikan Kembali secara Kontekstual untuk Kelas Farmasi (dibimbing oleh Abd. Hakim Yassi dan Hamzah A. Machmoed).

Penelitian ini bertujuan (1) mengetahui bagaimana implementasi strategi mendefinisikan kembali kata berdasarkan konteks dalam pengajaran kosakata untuk kelas Farmasi; (2) menginvestigasi apakah strategi mendefinisikan kembali kata berdasarkan konteks dapat meningkatkan capaian koskata mahasiswa Farmasi; (3) mengetahui sikap mahasiswa Farmasi terhadap aplikasi strategi mendefinisikan kembali kata berdasarkan konteks.

Penelitian ini adalah penelitian kuantitatif dengan melakukan percobaan murni yang dilangsungkan pada mahasiswa Jurusan Farmasi, Fakultas Matematika dan Ilmu Pengetahuan Alam, Universitas Islam Makassar. Strategi mendefinisikan kembali kata berdasarkan konteks diajarkan pada kelas MIPA A sebagai kelompok uji coba. Untuk mengetahui peningkatan capaian koskata mahasiswa, peneliti menggunakan tes awal dan tes akhir. Kemudian data dianalisis dengan menggunakan SPSS dan uji-t.

Hasil penelitian menunjukkan; *pertama* prosedur dalam aplikasi strategi mendefinisikan kembali kata berdasarkan konteks dapat membawa mahasiswa menjadi pembelajar yang mandiri di dalam dan di luar kelas dan strategi ini dapat diaplikasikan untuk kelas Bahasa Inggris Kefarmasian. *Kedua*, terdapat peningkatan skor mahasiswa setelah pemberian uji coba. Secara statistik, skor rata-rata untuk tes awal adalah 36.7667, dan rata-rata skor untuk tes akhir adalah 54.1467. Hal tersebut berarti bahwa pengajaran koskata melalui strategi mendefinisikan kembali kata berdasarkan konteks secara signifikan berpengaruh terhadap pencapaian koskata mahasiswa Farmasi. *Ketiga*, mahasiswa Farmasi memberikan sikap positif terhadap pengaplikasian strategi mendefinisikan kembali kata berdasarkan konteks dan terdapat 73.3 % mahasiswa Farmasi setuju jika pengajar bahasa Inggris untuk mata kuliah bahasa Inggris Kefarmasian menggunakan strategi tersebut untuk meningkatkan koskata mahasiswa. Dengan menggunakan strategi mendefinisikan kembali kata berdasarkan konteks pada pengajaran koskata dapat membawa dampak positif terhadap pengembangan capaian koskata mahasiswa Farmasi.

TABLE OF CONTENT

COVER OF THESIS.....	i
APPROVAL.....	ii
PERNYATAAN KEASLIAN TESIS	iii
ACKNOWLEDGMENT.....	iv
ABSTRACT.....	v
ABSTRAK.....	vi
TABLE OF CONTENT.....	vii
LIST OF TABLE.....	viii
LIST OF FIGURE.....	x
LIST OF ABBREVIATION.....	xi
LIST OF APPENDIX.....	xii
CHAPTER I INTRODUCTION	1
A. Background of the Research.....	1
B. Scope of the Problem.....	6
C. Research Question.....	6
D. Objective of the Research.....	7
E. Scope of the Research.....	7
F. Significance of the Research.....	7
CHAPTER II REVIEW OF RELATED LITERATURE.....	9

A. Previous Studies.....	9
B. Theoretical Background.....	13
C. Vocabulary Teaching and Learning in Using Contextual Redefinition Strategy.....	30
D. Conceptual Framework.....	32
E. Hypotheses.....	34
CHAPTER III METHODOLOGY.....	35
A. Research Design.....	35
B. Variables and Their Operational Definitions.....	38
C. Time and Location of the Research.....	39
D. Population and Sample.....	40
E. Research Instruments.....	40
F. Classification and the Scoring Scale.....	41
G. Procedures of Data Collection.....	42
H. Measurement Scale	43
I. Data Analysis	43
CHAPTER IV FINDING AND DISCUSSION	44
A. Finding.....	44
1. The Implementation of Contextual Redefinition Strategy in Pharmacy Class	44
2. Contextual Redefinition Strategy in Improving the	

Pharmacy Students' Vocabulary Achievement	48
3. The Pharmacy Students' Attitude Towards the Application of Contextual Redefinition Strategy	55
B. Discussion.....	66
1. The Implementation of Contextual Redefinition Strategy in Pharmacy Class	66
2. Contextual Redefinition Strategy in Improving the Pharmacy Students' Vocabulary Achievement.....	73
3. The Pharmacy Students' Attitude on the Application of Contextual Redefinition Strategy.....	79
CHAPTER V CONCLUSIONS AND SUGGESTIONS.....	83
A. Conclusions.....	83
B. Suggestions.....	84
BIBLIOGRAPHY.....	86
APPENDICES.....	89
CURRICULUM VITAE.....	

LIST OF TABLE

Number	page
Learning Burden	24
The classification and score scale of students' vocabulary achievement	42
The students' pre test score before treatment	49
The students' post test score after treatment	50
The overall score	51
Paired samples statistics	52
Paired differences samples test	53
The t-test result	53
The statistics frequencies	54

LIST OF FIGURE

Number	page
Vocabulary Size	25
Conceptual Framework	33
The Frequency of Students' Pre Test Score	49
The Students' Post Test Score	50
The Diagram of Overall Students' Score	51
The Diagram of Statement Number 1	55
The Diagram of Statement Number 2	56
The Diagram of Statement Number 3	56
The Diagram of Statement Number 4	57
The Diagram of Statement Number 5	58
The Diagram of Statement Number 6	58
The Diagram of Statement Number 7	59
The Diagram of Statement Number 8	59
The Diagram of Statement Number 9	60
The Diagram of Statement Number 10	60
The Diagram of Statement Number 11	61
The Diagram of Statement Number 12	61
The Diagram of Statement Number 13	62

The Diagram of Statement Number 14	62
The Diagram of Statement Number 15	63
The Diagram of Statement Number 16	63
The Diagram of Statement Number 17	64
The Diagram of Statement Number 18	64
The Diagram of Statement Number 19	65
The Diagram of Statement Number 20	65

LIST OF APPENDIX

Number	Page
Pre Test Worksheet	
Post Test Worksheet	
Questionnaire	
Lesson Plan (Teaching Vocabulary For Pharmacy Class in Using Contextual Redefinition Strategy)	
Lesson Plan (Teaching Vocabulary For Pharmacy Class in Using Conventional Way)	
A Contextual Redefinition Strategy Lesson	
A Contextual Redefinition Strategy Chart	
The Examples of Reading Materials	
The Result of Students' Pre Test For MIPA Class A	
The Result of Students' Post Test For MIPA Class A	
The Result of Students' Pre Test For MIPA Class C	
The Result of Students' Post Test For MIPA Class C	
The Result of t-Test	
The Frequency of Positive Statements	
The Frequency of Negative Statements	
The Student Works	
Surat Permohonan Izin Penelitian	
Surat Izin Penelitian	

LIST OF ABBREVIATION

CALD3	Cambridge Advance Learner Dictionary the third Edition
CAR	Classrom Action Research
CBC	Curriculum Based Competences
CR Strategy	Contextual Redefinition Strategy
EFL	English as foreign language
ESP	English for Specific Purposes
FL	Foreign Language
GE	General English
H0	Null Hypothesis
H1	Alternative Hypothesis
MIPA	Matematika dan Ilmu Pengetahuan Alam
SL	Second Language
TEFL	teaching English as foreign language
UIM	Universitas Islam Makassar

CHAPTER I

INTRODUCTION

This chapter presents background of the study, scope of the problem, research question, objective of the research, scope of the research, and significances of the research.

A. Background of the Study

Teaching and learning are one of the essential processes in improving the human resource. Regarding the teaching and learning of English, it is intended to emphasize the learner's capacities in acquiring this foreign language as a tool to provide a better access toward sciences and technology. Equally, some experts and scientists expand their horizon through English. Therefore, the English as foreign language (EFL) learners are demanded to acquire English in order to easily get knowledge and easily develop their knowledge. The English learners are not only from English department but also from other various disciplines that need English to fulfill their particular needs.

Teaching and learning English in Indonesia have generally not been satisfactory yet. Whereas the English curriculum for Indonesian context emphasizes on the student's integrated skills or students language competences which is called Curriculum Based Competence (CBC). In the

University level for example, the four language skills cannot be acquired simultaneously since some of students are still low vocabulary achievement. The teaching of that four language aspects (reading, listening, writing and speaking) is determined by certain factors such as habit, student's strategies, material and teaching techniques. Weda (2007) pointed that the failure in English teaching and learning is caused by the students' strategies and the vocabulary mastery. He added that some of students can hardly comprehend the meaning of words from the reading without having high frequency level of vocabulary.

Acquiring a high proficiency in English should be based on the vocabulary knowledge, for the reason that vocabulary competence is the key in acquiring all of the English language aspects (McKay, 2002). According to Xia (2010; 10) that vocabulary knowledge is of great importance in expressing taught, attitude, and ideas in all language interaction activities. Therefore, lack of vocabulary mastery makes the learners become dependent to their teachers.

Supporting this idea, Nation (1990: 1, 2) suggested that as foreign language teacher should give awareness to the vocabulary teaching. He acknowledged that if we want to plan the vocabulary goal in long life education, at least we need three things to be learned; the amount of word in the language, the amount of word from the native speaker and the amount of word will use in that language. Moreover, (Nation, 2001) classified the students' vocabulary level into four types: high frequency

words, academic vocabulary, technical vocabulary, and low frequency words. For instance, the university students are focused on achieving at least the academic vocabulary and technical vocabulary.

In the field of vocabulary learning research nowadays, the vocabulary learning strategy has been a notable area of growth in recent years (Oxford, 1990). However, not much has been reported on the range and types of vocabulary learning strategies in Indonesia. Among the others is Nurbaya (2005) whose study concerned about “The Contextual Redefinition Strategy to Overcome the Low of Students’ Vocabulary Achievement”, and “The Effect of Keeping Vocabulary Notebooks as One of Vocabulary Learning Strategies of The Students at SMKN 7 WTP” as reported by Syamsuddin (2011). In addition, Wiese (2012) has analyzed two vocabulary strategies, verbal and visual word association or contextual redefinition, and found them as the best suited for transferring new words into students’ long term memory.

Those previous studies above concerning primarily on vocabulary learning strategy for Senior High School Students, and very few studies on vocabulary learning strategy for university students. Nurbaya (2005) and Syamsuddin (2011), their studies investigate the relationship between students’ vocabulary strategies with the students’ vocabulary achievement at Senior High School Students. Whereas, Wiese (2012) study that, he compares of the two vocabulary learning strategies at same level of students with Nurbaya and Syamsuddin.

Based on these facts, it is important to investigate the university students' strategy in acquiring vocabulary. The investigation was conducted at pharmacy students of Makassar Islamic University, whereas the students of pharmacy are expected to be able to improve their English language proficiency through the high vocabulary achievement which is currently assumed very low. This is supported by the result of final examination for General English (GE) classes of the first semester students, academic year of 2012-2013. Some of pharmacy students also said that the teachers still focus on the grammatical knowledge without teaching them vocabulary knowledge as a base in improving their English language proficiency.

Teaching English for Pharmacy students as English for Specific Purposes (ESP) teaching is certainly different from teaching in GE class. ESP students consequentially learn English for their particular needs such as for supporting their job, career or their literature study. As Dudley and Joe (1998; 1, 2) stated that ESP teaching are separate activity with teaching English for foreign language. ESP teacher is suggested to teach terminologies to comprehend the idea of particular literature.

According to Richard (2007), teaching vocabulary for ESP students can help them for fulfilling their future needs, as can be seen the promising opportunities for the pharmacists in this era. There are some private hospitals, international hospitals, medicine factories, department of medical sciences, and the others fields that certainly will need

pharmaceutical professionals. Achieving these targets need English as a tool and English vocabulary as the key toward English acquisition.

English vocabulary teaching needs an appropriate strategy, as Nation (1990; 159) affirmed that if a teacher will help students handle with low frequency vocabulary, he is better to spend time to concentrate on vocabulary teaching strategies for dealing with unknown vocabulary by using contextual redefinition strategy or other available strategies. Differently, Wiese (2012) found that the use communicative approach in teaching ESP class, where teacher puts a list of words on the board and students write them and then look them up in the dictionary, and memorize them, has been not effective and students cannot acquire the vocabulary knowledge well.

Whereas, Tierney et al. (1990; 196), they acknowledged that teachers who have access to a repertoire of strategies that will support relevant vocabulary words, it is hoped to help students learn and keep words in long term memory. He declared the eight strategies such as possible sentences, list-group-label, contextual redefinition, preview in context, future analysis, word map, vocabulary self-collection strategy, and key word method. Teacher can use these strategies in various aspects to promote the students' vocabulary development.

The eight vocabulary teaching strategies proposed by Tierney et al. (1990; 197) can be readily applied in all classroom situations and for all students' levels include pharmacy students. The pharmacy students need

a suitable strategy in order to assist them to be independent inside and outside of class. There is no one can assume that a single strategy is suitable for this class without deeply investigate it. This study will investigate whether the contextual redefinition strategy can improve pharmacy student's vocabulary achievement well.

B. Scope of the Problem

Based on the background information stated above there are some problems faced by the pharmacy students of Makassar Islamic University in learning English such as they are still in low vocabulary achievement beside that ESP teachers still focus on the grammatical knowledge without teaching vocabulary knowledge or terminology to the students as a base in improving of their English language proficiency.

C. Research Questions

To simplify the research, the researcher formulates the research questions as follow:

1. How is the contextual redefinition strategy implemented in vocabulary teaching for pharmacy class?
2. How does the contextual redefinition strategy improve the pharmacy students' vocabulary achievement?
3. What is the pharmacy student's attitude on the application of contextual redefinition strategy?

D. Objective of the Research

Objectives of the research is designed to answer the research questions, these are;

1. To implement the contextual redefinition strategy in vocabulary teaching for pharmacy class.
2. To investigate whether the contextual redefinition strategy could improve the pharmacy students' vocabulary achievement.
3. To find out the pharmacy students' attitude on the application of contextual redefinition strategy.

E. Scope of the Research

This research focused on teaching-learning vocabulary by using contextual redefinition strategy through reading activity employed by the second semester student class of Pharmacy Department of Mathematics and Natural Sciences Faculty at Makassar Islamic University, academic year 2012/2013. The reading materials are used by pharmacy literature, medical industries, and health readings which are taken from various journals, articles, and authentic materials

F. Significance of the Research

There are two kinds of significances of the research are theoretical and practical significance.

1. Theoretical Significances

By researching vocabulary strategies, lecturers at Makassar Islamic University are able to assimilate into their curriculum a strategy that help their students be successful in the classroom and obtained the vocabulary needed to succeed in learning English. By applying this strategy, it can lead the students of pharmacy to be independent reader inside and outside of the classroom. In addition, this research is expected to contribute to the teaching and learning vocabulary theory. This research also supports some relevant theories of teaching English as foreign language (TEFL) in ESP class.

2. Practical Significances

This research is expected to give awareness to the reader how contextual redefinition on post reading activity gives contribution for increase vocabulary students' achievement. This strategy can also increase the students' vocabulary, besides that the teacher can apply this strategy in teaching English for specific subject or for general subject. For other researchers who will concern to the teaching and learning theories, this study is expected to provide support and understanding how the foreign language can be acquired well by the students.

CHAPTER II

REVIEW OF RELATED LITERATURE

The objective of this chapter is to provide information related to the theories that being used in the present study. This session presents several sub chapters namely previous studies, theoretical background, teaching and learning vocabulary in using contextual redefinition strategy, conceptual framework, and hypotheses.

A. Previous Studies

To make clear the objective of the study, the researcher needs to compare the other studies from some literatures; what has been done by some scholars or researchers and what needs to be done. Many researches in the field of vocabulary teaching and learning have been conducted by language teachers and researchers. For example, Nagy (1988) in her study is "Vocabulary Instruction and Reading Comprehension in University of Illinois at Urbana-Champaign". He had concerned on vocabulary learning and vocabulary instruction for improving of the students' vocabulary.

In vocabulary learning and teaching, Nagy (1988) used reading materials to improve the students' vocabulary achievement. He investigated some vocabulary instructions in order that the students can

easily comprehend the reading materials or how the vocabulary instruction could contribute to the reading comprehension.

Syamsuddin (2011) have conducted the action research entitled “The Effect of Keeping Vocabulary Notebooks on Vocabulary Acquisition of The Students of SMK Negeri 7 Watampone”. He indicated that using vocabulary notebooks affected the Senior High School students’ vocabulary acquisition better than conventional method and the students were very interested towards the using of vocabulary notebooks. She assumed that vocabulary notebooks give positive effect for the improvement of students’ vocabulary.

Nurbaya (2005) studied about “The Problem Solving in The Lack of Students’ Vocabulary Mastery with the Application of Contextual Redefinition Strategy”. This study was a Classroom Action Research (CAR) and he applied contextual redefinition strategy as problem solver in the setting of students' lack of vocabulary achievement. According to Piaget (2008) that cognitive theory is closely related this study as the frame of study. Jean Piaget theory “cognitive” was the primary theory that she used.

She added that teacher has big role; he/she as subject not as an object and he/she as learning designer. Teacher prepares materials in order that the students can find out the meaning of the word. She offered the contextual redefinition strategy as one way to solve the lack of

students' vocabulary; she assumed that one of vocabulary strategy improvement in teaching is contextual redefinition strategy.

While, Wiese (2012) have assessed two vocabulary learning strategies entitled "Analysis of Two Vocabulary Learning Strategies; A Study to Indicate Which Strategy, Verbal and Visual Word Association or Contextual Redefinition Strategy, is Best Suited for Transferring New Words into Students' Long Term Memory". He compared the two theories and determined which one of them is the best suited for transferring new words into long term memory. To improve the students memorizing capability, it needs the concerning of teacher in implementing of materials. He analyzed how the students could know more than thirty words after the verbal and visual word association or contextual redefinition strategy was used for ten days.

He hypothesized that there will be no difference in the amount of new vocabulary words transferred into long term memory between these two strategies. Moreover both of strategies can improve the students' vocabulary achievement well. His study used classroom action research and it indicated that by using the verbal and visual word association strategy, students could transfer vocabulary words to their long term memories at a slightly higher rate than when used contextual redefinition strategy. Wiese study was not intended to examine the validity of other vocabulary strategies. In addition, her study did not distinguish between

the students with reading or learning disabilities and the students without such disabilities.

The above mentioned studies showed the various ways, methods, and strategies by which the students can acquire vocabularies. Some of the researchers have concerned to how vocabularies can be acquired from some learning activities. For example, Syamsuddin (2011) at Makassar State University (2001) suggested how vocabularies can be easily memorized by using vocabulary notebooks and Nurbaya (2005) showed that how the students can solve their problem by using contextual redefinition strategy in learning vocabulary. The student problem refers to the lack of vocabulary which implies the competences of the student. The last previous studied which was conducted by Wiese (2012) is the researcher compared the two vocabulary learning strategies in one class of the senior high school students; verbal and visual word association or contextual redefinition strategy, which one of them can transfer the students vocabulary well.

Some of the studies above provide understanding to the researcher in continuing his study because they are closely related and have same interest. In addition, there are weaknesses and the strengths associated to the above studies that need to be noted. Syamsuddin (2011) proposes that a vocabulary notebook has an effect on the students' vocabulary improvement without concerning on one of the available vocabulary teaching theories. Nurbaya (2005) in her study suggested that contextual

redefinition strategy can be a solution for the students who concern to the mastery of foreign language well.

These facts sparks the idea to analyze how the vocabularies acquired and achieved by the strategy employed in the pharmacy students of Faculty of Mathematics and Natural Sciences of Makassar Islamic University as ESP teaching class. It is interesting to be deeply analyzed in ESP class of learning strategy, because some of ESP teacher are still focus on grammatical aspect. The researcher combined the receptive vocabulary and the productive vocabulary in order that students can memorize their vocabulary well. Meaning aspect is the primary of this study and it alohas proved out the effectiveness of contextual redefinition (CR) strategy in teaching-learning vocabulary.

B. Theoretical Background

1. Learning Theories

Learning is a complex process in changing of human behavior and attitude through individual knowledge and interaction with their environment, it is a conscious process. Learning theories are conceptual frameworks that describe how information is absorbed, processed, and retained during learning. Cognitive, behavior, constructivism and environmental influences, as well as prior experience, all play a part in

how understanding, or a world view, is acquired or changed, and knowledge and skills retained.

a. Behaviorism

According to Piaget (2008) that the term of "behaviorism" as taught, intentions or other subjective experiences. It is unscientific and insisted that psychology must focus on measurable behaviors. He assumed that learning is the acquisition of a new behavior through conditioning. Behaviorism is an approach to psychology that combines elements of philosophy, methodology, and theory. Behaviorist approaches are different from most other perspectives because they view people as controlled by their environment.

According to Croft and Cruse (2004), brand of behaviorism is Radical. Radical behaviorism is the philosophy of the science of behavior. He added that behavior as a function of environmental histories of reinforcing consequences. Behaviorism lies on the opposite side of the ideological spectrum as the field of cognitive science. Unlike less austere behaviorism, it does not accept private events such as thinking, perceptions, and unobservable emotions in a causal account of an organism's behavior.

Behaviorism focused on the result of learning; through this theory the students will master the competence, skill and attitude. Thorndike in Brown (1994) highlighted that behavior learning as a process of stimulus and response. The stimulus and response will be concrete or non

concrete. Skinner in Brown (1994; 77) stated that the stimuli follows a response and tend the strengthen behavior and increase the possibility of a repetition of that response represent a powerful force in the control of human behavior.

b. Cognitive Theory

Cognitive principles are closely related to the learner brain, mental and intellectual function. Croft and Cruse (2004), they gave an overview about cognitive principle in linguistics aspect where linguistics cognitive refers to the approach to the study of language which has three major hypotheses: language is not an autonomous cognitive faculty, grammar is conceptualization, and knowledge of language emerges from language use. These three hypotheses represent a response by the pioneering figures in cognitive linguistics to the dominant approaches to syntax and semantics at the time, namely generative grammar and truth-conditional (logical) semantics.

According to Hutchinson and Waters (1987; 43), cognitive theory can makes the students be active to receive information from text reading than behaviorist learning theory where the learner passive. They added that cognitive theory is applied by the students in learning the various mental processes used in thinking, remembering, perceiving, recognizing, classifying, etc. They added that cognitive theory of learning works as the problem solving task for the students, the cognitive view had also a major effect on ESP teaching through the reading activities. Where the cognitive

views have made students be aware of their reading strategies to consciously understand the foreign language.

Richard and Schmidt (2002) pointed that cognitive is the various mental processes used in thinking, remembering, perceiving, recognizing, classifying, etc. So that, the idea of cognitive is not just we should describe a concept or the idea of something and categories by means of an abstract definition, but we should also account the things that definition is about and we achieve the knowledge.

c. Constructivism

According to Jorda and Campbell (2010), the constructivist view of learning usually means encouraging the students to use active techniques. The students use their experiments, real-world problem solving as their learning to construct more knowledge and then to reflect on and talk about what they are doing and how their understanding is changing. Jorda and Campbell added also that in constructivist view, the students try to be a mentor and teacher facilitates the students to construct their knowledge.

In addition, Dimitrous (2011) cited that in the constructivist paradigm, the learner interacts with their environment and the learner constructs their own conceptualization. They try to be problem solver, autonomous and independent learner. The emphasis is on the learner rather than the teacher. He added also that based on constructivism, learning is the result of individual mental construction, whereby the learner

learns by impression of matching new against given information and establishing meaningful connections.

2. Teaching and Language Learning

Language is a complex form of communication, and the people talk in order to share or request information (Kroeger, 2005). It is used to communicate each others, to express our ideas, feeling, taught, and desires. It means that language is an essential part of human life. The unit of language can be reached only through speech, therefore by analyzing specific utterances we can identify the unit of which language made up (Ullmann, 1983; 23). Language as semiotic system or system of meaning is very important to understand by the language learner itself. Language must be understood as reflection of human though process (Hutchinson and Waters, 1987; 39).

Richard and Schmidt (2002; 284) assumed that language is a system of human communication which consists of the structure which arranged from their written representation into larger units. Language achievement is a mastery of learner in one language of second language (SL) and foreign language (FL). Language achievement is also what has been taught or learned after a period of instruction. He also gave meaning to the language acquisition as the learning and development of a person's language.

Language learning, as is the first and second language acquisition, is aimed to help language learner to appreciate themselves; know their environment, to be aware of their cultures, and other cultures (Nurbaity, 2009). Learning of language also contributes to the language learners to be competent to communicate their ideas, way of thinking, to participate in the society as human, and to express their imaginative abilities (Keese, 2012).

Brown (1994; 7) considered teaching and learning in the traditional definition and how do they interact. Learning is the process of how the knowledge acquired; it can change the learners' behavior. Otherwise, teaching cannot be defined as a part of learning process, but teaching is a guiding and facilitating process, enabling learners to learn, and setting the condition for learning.

According to Weda (2007; 8), learning is a conscious the language rule knowledge which does not typically lead to conversational fluency but occurs unconsciously and spontaneously does lead to conversational fluency, and arise from naturalistic language.

3. Vocabulary Knowledge

Richard (2007; 80, 81) emphasized that knowing vocabulary, it means that knowing more the syntactic behavior and knowing vocabulary, the learner can easily differ the forms of word. He added that define of the meaning of terminology is how the student learns the rules of vocabulary

itself. Therefore he highlighted that the vocabulary teaching will influence to the English as foreign language (EFL) learner to achieve their knowledge. Vocabulary knowledge refers to the word meaning, word form, word lists, text comprehension, etc.

a. Words

According to Ur (2009; 79) that word is the smallest of the linguistic units which can occur on its own in speech or writing. It is differing to vocabulary. Base on grammatical terms, the word is smallest amount normally separate form occurs in writing, it appears as a stretch of letter with a space either side. Ullmann (1983; 26) define word as the smallest significance element of the unit of speech. Where the word plays such crucial part in the sentences or the structure of language. Word is a unit of language which can be stand freely and composed of phonemes or morphemes (Gairns and Redman, 1987). It means that word is a part of vocabulary knowledge and a part of grammatical items.

The meaning of word from Cambridge Advance Learner Dictionary the third edition (CALD3) is a single unit of language which has meaning and it can be spoken or written. Richard and Schmidt (2002; 599) stated that word is the smallest of the linguistic units which can occur on its own in speech or writing. Gairn's and Redman (1986; 13) highlighted that to comprehend a word entirely, hence, as a scholar have to identify not only what it refers to, but also where the boundaries are that break away it from words which connected to the meaning of that word. Richard (2007, 82)

pointed that the meaning of word refers to the intersection along a number of attributes, or minimal semantic features. He added that knowing a word means that knowing some different meaning which associated with that word.

b. What is Vocabulary

In the Cambridge Advance Learner Dictionary the third edition (CALD3) mentioned that vocabulary is all known words and used by a particular person, all those words exist in a particular language or subject. Richard and Schmidt (2002; 580) defined that vocabulary is a set of lexemes, including single words, compound words and idioms. Vocabulary also refers to the active/passive language knowledge, content word, frequency, and type. As simplified by Ur (2009: 60) that vocabulary is the word as teacher teach in the foreign language teaching. But he added that vocabulary may be more than a single word or multi word idioms.

Xia (2010; 12) defined the vocabulary knowledge as a complex system which consists of several types of word knowledge beside meaning and form. What a word means is defined by its relationship to other words. Word has synonyms that mean exactly or nearly the same as each other. Another relationship which defines the meaning of words to each other is that of hyponymy (Harmer, 1991; 18, 19).

In different words, Richard and Schmidt (2002; 580) defined the vocabulary as a set of lexeme like; single words, compound words and idioms. Differently, Nagy (1988; 2) suggested that vocabulary knowledge

is essential to reading comprehension; it means that the student cannot understand the text without knowing what most of the words mean, he added that increasing vocabulary knowledge is an essential part of the educational process.

c. Types of Vocabulary

There are two types of vocabulary learning, these are active vocabulary and passive vocabulary.

1) Active Vocabulary

Active vocabulary consists of words that we use and know well to use by ourselves. It refers to the active language knowledge which involves that how the students understand the passive knowledge (Richard and Schmidt, 2012; 9). Active vocabulary, on the other hand, is vocabulary that we can recall and use at will when the situation requires it. We are choosing to use the word and actively retrieving it from memory.

2) Passive Vocabulary

Passive vocabulary refers to the passive language knowledge which consists of words that the students understand but they cannot use all of them. With passive vocabulary, we can listen and understand without actively them in the sentences or speaking. Hearing the vocabulary used prompts us to recall its meaning. In other words, we are being made to recall it. So it is passive vocabulary.

d. Receptive and Productive Vocabulary

Richard & Schmidt (2002; 293) stated that receptive knowledge is refers to reading and listening or sometimes called as passive. They added that Receptive Vocabulary is the vocabulary knowledge which gets from the reading activity or listening are called receptive vocabulary. Gairns and Redman (1986; 64) stated that receptive vocabulary is language items which recognize and comprehend in the context of reading and listening material. Receptive vocabulary also called as recognition vocabulary; the total number of words a person understands, either in reading.

Richard & Schmidt (2002; 293) highlighted also that productive knowledge refers to speaking and writing or sometimes called as active. They added that productive vocabulary is the vocabulary which produced by learner in speaking or writing learning. Gairns and Redman (1986; 64, 65) assumed that productive vocabulary is language items which recognize and use appropriately the lexicon considered necessary to meet the standard of general ability of the students.

e. What need to be taught in teaching of vocabulary?

Nation (1990; 36) highlighted that in teaching vocabulary needs clarified some aspect of vocabulary. These aspects involve that, knowing the terminological aspect from language learning burden (see the table 1).

In teaching and learning vocabulary knowledge as the instructor of foreign language need to strengthen to one aspect of language in order that the learner can easily comprehend it well. Differently with Ur (2009; 60-62) that, there are at least six points need to be taught in teaching of vocabulary such as;

1) Form; pronunciation and spelling

Student who learns vocabulary knowledge needs to know what a sound like and what it looks like. What sound like refers to pronunciation, and what it looks like means that how to spell it. The both of these aspects accurately presented and learned.

2) Grammar

When teaching a new vocabulary, it is very important as a teacher to provide the learners with the form of that vocabulary. The grammar of that terminology will need to be taught if that is not clearly covered by general grammatical rules. For the example; in verb term there are present and past forms, in noun term there are singular and plural forms, etc.

3) Collocation

Collocation is the combination of words formed when two or more words are often used together in a way that sounds correct (CALD3). Collocation is also often noted in dictionaries by providing the whole collocation under one of the head words.

4) Aspect of meaning 1: denotation, connotation, and appropriateness.

Denotation is short definition from dictionary. While, connotation may refer to positive and negative this may or may not be indicated in a dictionary definition.

5) Aspect of meaning 2: meaning relationships or meaning concept

The other relationship of meaning is includes synonyms, antonyms, hyponyms, co-hyponyms, super ordinates, and translations.

6) Word formation

Other ways of vocabulary items are combining two words; two noun, noun and gerund, or noun and verb.

Form	
- Spoken	Does the word contain only familiar sounds or clusters of sounds? Is the stress predictable?
- Written	Is the script like mother tongue script? Does the written form follow regular spelling patterns?
Position	
- Grammar	Does the word occur in the same patterns as the corresponding mother tongue word?
- Collocation	Does the word commonly occur with predictable words or types of words?
Function	
- Frequency	Does the mother tongue word have the same frequency?
- Appropriateness	Does the degree of politeness, formality, etc. of the mother tongue word, or other English words learned so far?
Meaning	
- Concept	Does the English concept correspond to a mother tongue concept? Are the various meanings of the word obviously related to a central concept? Is the meaning predictable from the form of the word?
- Association	Does the mother tongue word give rise to associated words similar to the English word?

Table 1, Learning Burden (Nation, (1990, 36))

f. Vocabulary Test and Assessment

According to Nation (1990; 77, 78, 79) that vocabulary test is designed to decide the vocabulary learning of learner after join the course. There are some vocabulary levels of the learner such as low level, high level and advanced level. Otherwise Nation (2001) highlighted that assessment is designed to know the learners' vocabulary knowledge what they have learned during a course.

Brown (2003; 4, 5) pointed that a test is a method or way to measure the students' performance, ability and knowledge or it can be an instrument which requires the test taker. He added that a test will measure also the general ability of the students which focused on the specific competencies or objectives. In contrast to assessment, it is an ongoing process that encompasses a much wider field. After teaching activity a teacher can assess their students or what is called ongoing teaching.

So that vocabulary test and assessment are designed for the learners' vocabulary when the teacher conducting a course and after a course. It can be applied in various types of test. They are ways to investigate the quality of learners' vocabulary knowledge as shown in the figure below;

$$\frac{N \text{ correct answers} \times \text{total } N \text{ words in dictionary}}{N \text{ items in test}} = \text{Vocabulary Size}$$

Figure 1; Vocabulary Size (Nation (1990; 76)

4. Contextual Redefinition Strategy

From the Cambridge Advance Learner Dictionary the third edition (CALD3), context is the text or speech that comes immediately before and after particular phrase or a piece of text and helps to explain its meaning. Context refers to the sentence, text or literature. Contextual is formal or specialized related to the context of something. Contextually is formal or specialized to consider something in its context. Redefinition is explaining or restates the meaning of words or phrase.

O'Malley in Brown (1994; 117) defined that contextualization is placing a meaning of word in language progression. O'Malley stated that contextual redefinition strategy offers students specific steps for deducing the meaning of unknown (unclear) words in a reading passage by seeking clues from their context in a larger text selection. This strategy encourages students to focus on what is clear and obvious in a reading selection, to state, as much as is possible, the author's general intent or meaning in a passage, and to use these observations to help interpret unclear terms and ideas within the known context. Otherwise, contextual redefinition strategy calls for close attention to word order, syntax, parallel ideas, and examples as keys for predicting word meaning (Nation, 2001).

Contextual meaning is the meaning of a linguistic item has in context, for example the meaning a word has within a particular sentence, or a sentence has in a particular paragraph. According to Allen (2007; 1) that contextual redefinition strategy is a strategy in teaching of vocabulary

and reading comprehension which helps students to the importance of context clues in understanding the meaning of word or concept. He added that by this way it will gives the opportunity to the students to use the variety of context clues to predict the meaning and verify the meaning.

Tierney *et.al* (1990) simplified that contextual redefinition strategy is one of strategies in vocabulary teaching which designed to enable students how to use context to make informed guess about the meaning of words. It is appropriate to the students at all levels who will encounter in their reading comprehension the difficult words that have available definition. Nagy (1988; 5) stated that learning vocabulary by using contextual redefinition strategy is combine the contextual and definition of word, teacher can write a sentences and the students can figured out that sentences related to the context.

5. Reading Comprehension

Vocabulary knowledge is closely related to the reading comprehension. There are some experts assumed that we learn vocabulary to comprehend the meaning or the idea of reading which are expanded by native speaker. Because reading comprehension strategy can involve and encourage the students in order to help understand texts. Basically, reading deals with the ability of people in articulating word in written text and understanding meaning, so the reader will get and catch

the idea through adjustment of language patterns form. By reading activity, a reader will be able to comprehend the ideas of reading.

Larsen and Freeman (2000) stated that, reading is an activity which only gives knowledge to the reader, but the most important that you must think that how can you get the meaning of that reading. Tierney *et.al* (1990) gave an overview of the goal of reading comprehension development are to enable students to gain and get an understanding of the word to develop appreciation and interest, where the students can find out the solution to their personal or group problems so that they can become independent comprehend readers.

Reading is termed a receptive skill; where the reader receives input from a researcher through reading. They added also, reading consists essentially of decoding and interpretive skills. Decoding at a simple level is a matter of matching symbols words, decoding is a matter of interpreting social consciousness from words. Reading is a complex process which involves external and internal factor of the reading. Post reading is the last activity in describing the text of reading, it helps student to consolidate and redefine of some ideas or words in order to the reader can improve their understanding.

6. English for Specific Purposes (ESP)

Hutchinson and Waters (1987; 14) characterized ESP in three forces; the students need, new ideas about language, and new ideas

about learning. Similarly, Dudley-Evans and Joe (1998; 3) characterized ESP teaching as teaching English based on students need, closely related to the particular disciplines of students and it is contrarily with the general English teaching. They added that teaching of ESP should be different in application methodology with GE teaching. The main focus of ESP is practically helping the students to learn or to know deeply their field.

According to Hutchinson and Waters (1987; 19), ESP is an approach not a product, it is an approach to language learning, and typical of a particular content of use. Teaching English for Pharmacy, biology, business, or other fields are ESP teaching classes, certainly different from teaching in general English class. Hutchinson and Waters added that ESP students consequentially learn English for their particular needs such as for supporting their job, career or their literature study. It means in teaching practice, a teacher of ESP should concern in designing appropriate courses for various group of learners.

As Dudley-Evans and Joe (1998; 1, 2) stated that ESP teaching are separate activity with teaching English for EFL learner. It has different syllabus, methodology and activities of the disciplines. So that in teaching ESP, it is not the whole of language aspects that are given to the students but, it is based on the students need. Hutchinson and Waters (1987; 21-22) highlighted that in preparing the teaching materials, an ESP teacher should know why does the student need to learn that language? What does the student need to learn? What aspect language will be needed?

What is the level of the student? And what theory and strategies will be applied in teaching?

C. Teaching and Learning Vocabulary in Using Contextual Redefinition Strategy

Tierney et al. (1990) stated that there are six strategies can be applied to teach vocabulary to the students, namely; 1) possible sentences, 2) list group label, 3) contextual redefinition, 4) preview in context, 5) feature analysis, 6) and key word method. He proposed to use contextual redefinition as one of the effective way to teach vocabulary in long term memory. This strategy is formulated to use context to find out the meaning of difficult term, and the students also can predict the relevant meaning of term without out of the context.

As Nation (1990; 51) proposed that teaching of meaning in context is very important technique in vocabulary teaching and learning by using demonstration. The meaning can be demonstrated by using an object, translate into another language, putting new word in a definition context (contextual redefinition), etc. contextual redefinition strategy will provides a format for deriving the meaning of unknown words that capitalize on the use of context and it gives the students' strategy to be independent reading in and outside the class.

Nation (2001) added that this strategy also is very appropriate for students of all grade levels both of GE or ESP class who may encounter a

few difficult words from their reading that may be defined in the context in which they occur.

Even though Nation progressed to concern in quickly give the meaning of word without separated the other aspects like word form and words use, but he emphasized that the most important thing in vocabulary teaching is the meaning of word from context. Both of Tierney et.al and Nation ways mentioned above are closely related to the students' brain or cognitive element.

Tierney et al. (1990) highlighted that; there are five steps in application the contextual redefinition strategy;

1. The teacher instructs to the students what the students do; teacher or student will choose the unfamiliar words from the text and put them in the chart;
2. Teacher will provide at least one sentence as an example in order that student can easily understand how to find out the meaning of word. The teacher examples it could be definition of word, synonym of word, comparison and antonym of word, etc.
3. The students put the word in different paper then the students define of them by their own argumentation. This way can be apply with pair work or group work.
4. The students predict the word meaning by contextually and give the reasons.
5. Use dictionary to verify the meaning if it is needed.

D. Conceptual Framework

The umbrella of this study is teaching and learning of vocabulary in ESP class. Teaching and learning process in this research is conducted in two classes; treatment class and control class. The students in the treatment class is taught vocabulary by using contextual redefinition strategy as the strategy to achieve the students' terminologies which taken from the authentic materials, article, and journal.

There are three outputs of this study; the first is the implementation of contextual redefinition strategy in pharmacy class, the second is the improvement of students' vocabulary achievement, and the third is the students' attitude on the application of contextual redefinition strategy in pharmacy class. After the application of CR strategy, hopefully it will improve the students' vocabulary achievement well and the students are more independent reader than before. Beside that the students will give positive attitude towards the application of the contextual redefinition strategy.

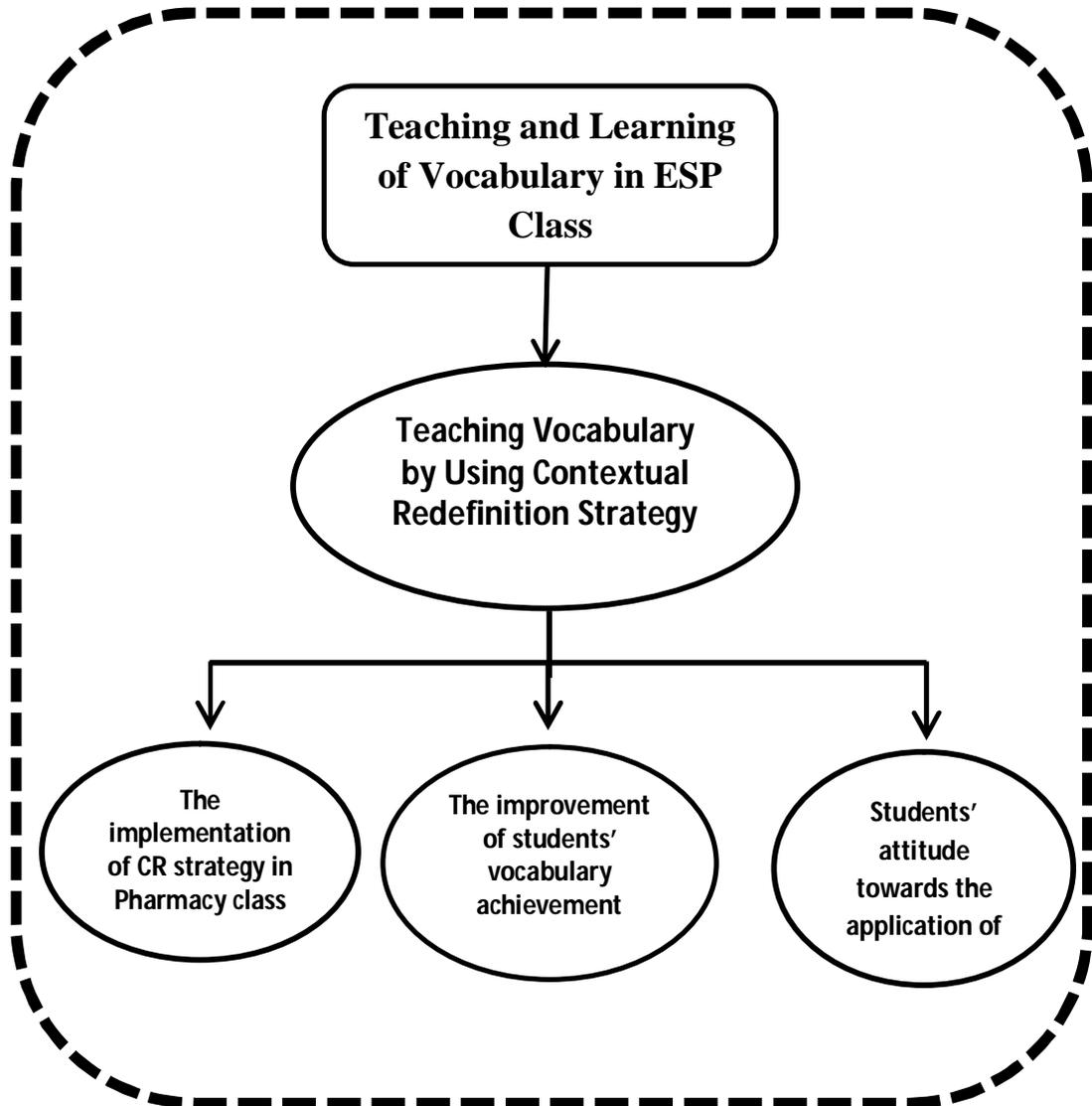


Figure 2; Conceptual Framework

E. Hypotheses

One of characteristics of quantitative research is creating hypothesis, that is specific, narrow, measurable and observable (Creswell, 2012; 12). So that, the researcher formulates the hypothesis in this study as follows:

1. The null hypothesis (Ho); contextual redefinition strategy in the treatment group does not significantly influences for the vocabulary achievement of the pharmacy students.
2. Alternative hypothesis (H1); contextual redefinition strategy in the treatment group significantly influences for the vocabulary achievement of the pharmacy students.

CHAPTER III

METHODOLOGY

The objective of this chapter is to present, describe and elaborate the methodological process in doing the study. This part contains several sub chapters namely research design, variables and operational definition, time and location of the research, population and sample, research instrument, the classification and the scoring scale, procedure of data collection, measurement scale, and data analysis.

A. Research Design

Research design was a way that employed by the researcher to collect and analyze the data in order to get answer from the research questions (Creswell and Clark, 2007; 6). This research was pure experimental research. In the experimental research, it tested an idea to determine whether it influences an outcome or dependent variables (Creswell, 2012: 295). Quantitative data include tests (pre-test and post-test) and closed-ended questionnaire, and the analysis, consist of statistically analyzing scores which collected from instruments.

In the experimental research used procedures that gather data in numerical form or quantitatively. More broadly, the term often implies an approach to the research that aims at causal explanation of phenomena through the identification of variables which can be made the basis of

experimental investigation (Richard and Theodore, 2002; 447). In conducting the experimental research, research design was important things to set by the researcher. There were four parts of this research; the first part was pre test, the second was treatment, the third was post test and the fourth part was questionnaire.

This study applied the pre-test in order to know the student's prior knowledge and the students' vocabulary score before treatment. In the treatment group, the students were taught vocabulary through contextual redefinition strategy about eight meetings. While teaching vocabulary, the researcher provided the reading materials from authentic materials of Health English Journals, Articles (Grice, 2003) and Handbook like the art of compounding book (Jenkins, 2002) as we see in the appendix VIII, it was about the terms of pharmacy. Through the intensive reading activity, the students got new words and catch the idea of that reading or literature.

The instructor provided the examples of contextual redefinition strategy works (see Appendix VI) and contextual redefinition chart (see appendix VII) such as finding out the synonym, comparison, and definition of term. Before students applied this strategy, teacher wrote available sentence to help students in comprehending the text. The next, students put the unknown words in the chart, afterward they predict the meaning of those unknown words and put them in the next column. After read the reading, students redefined them contextually by their own writing, if needed they can use dictionary to verify the meaning.

While, the post test was given to the students to know the score after treatment, it was taught vocabulary in using contextual redefinition strategy. Post test score found out the students' vocabulary achievement after practical reading with the application of some available reading methods and using the contextual redefinition strategy. Then, to know the improvement of students' vocabulary achievement that, post test scores were reduced by pre test scores as formulated below;

O1	X	O2	<i>Treatment group</i>
O3		O4	<i>Control group</i>
<i>Pre test</i>	<i>Treatment</i>	<i>Post test</i>	

The formula:

1. $O2 - O1$ for treatment group and
2. $O4 - O3$ for control group

(Sugiyono, 2010; 75)

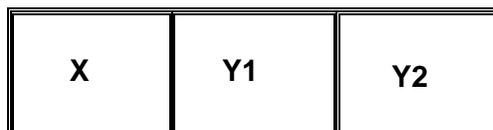
The students' vocabulary scores or their vocabulary achievement were primary data in this study. After applied pre test, treatment and post test, the students were given questionnaire. Questionnaire was given to the students of pharmacy UIM as treatment group to know their attitudes on the application of contextual redefinition strategy.

B. Variables and Their Operational Definitions

In the experimental research it was very important to make clearly about the variable

1. Variables

The variables in this study were independent variable and dependent variable. Whereas, the dependent variable was influences the independent variable. Based on the conceptual frame work in the prior chapter, the researcher took the contextual redefinition strategy as the independent variable, and the dependent variable consists of two variables, namely students' vocabulary achievement and students' attitude towards the application of contextual redefinition strategy.



X= Contextual Redefinition Strategy

Y1 = Students' Vocabulary Achievement

Y2 = Students' Attitude

2. Operational Definition of Variables

a. Contextual Redefinition Strategy;

Contextual redefinition strategy is one of vocabulary learning strategy which designed to use context and to unlock the meaning of

unknown words from the text. It makes informed rather than randomness, guesses about word meanings contextually (Tierney *et.al*, 1990; 204). According to Richard and Schmidt (2002; 127) that contextual redefinition strategy is redefined the meaning of word based on the context, it can also named as contextualization clue; in comprehension, information from the immediate setting surrounding an item in a text and which provides information that can be used to understand the meaning of an item. Such clues may be lexical or grammatical.

b. Vocabulary achievement;

Vocabulary is all the words known and used by particular person or all the words which exist in particular language. While, achievement is something very good result but difficult that a person succeeded in doing. According to Richard and Schmidt (2002; 127) that vocabulary achievement is the vocabulary that we get from learning process. Vocabulary achievement also was learner's mastery or what the learner achieves from second language vocabulary of what has been taught.

C. Time and Location of The Research

This research was conducted from May to June and the location of the research was at the Pharmacy Department, Faculty of Mathematics and Natural Sciences, Makassar Islamic University.

D. Population and Sample

According to Creswell (2012; 142) that population was a group of human or individuals who have the same characteristics. The populations of this research were the second semester students of Pharmacy Department, Faculty of Mathematics and Natural Sciences, Makassar Islamic University. There were four classes of the second semester students of Pharmacy Department, academic year 2012/2013, so that the researcher took sample randomly.

The selected two classes were divided into two groups, the first group or first class was MIPA Class A as the treatment group and the second group or second class was MIPA Class C as the control group. There were 30 students in MIPA Class A and 30 students in MIPA Class C, so that every class resulting in 60 total subjects of this research.

E. Research Instrument

There were two kinds of instrument applied in collecting data in this research, namely test and questionnaire.

1. Vocabulary Test

Most of the vocabulary tests use multiple choice techniques, matching the words, and guessing the meaning of the word in context. In obtaining the data from this study, the researcher used pre test and post test.

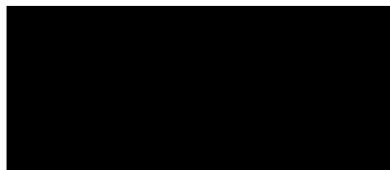
- a. The pre-test; pre test was designed to know the students' prior knowledge and it provided a measure on some characteristics that asses the subjects in an experiment before treatment given to them (Creswell, 2012; 297).
- b. The post-test; to measure on some attributes which assessed the participants in an experiment after treatment given to the participants (Creswell, 2012; 297).

2. Questionnaires

Questionnaire was designed to answer the questions by respondent; the form of questionnaire could be check lists and rating scale.

F. The Classification and the Scoring Scale

The scoring system used in this study was Yamin's formula adopted from Weda (2007; 65) as shown below;



B: the total of correct answers

C: the total of items/questions

The score category applied in this study is as follows:

No.	Classification	Score scale
1.	Very good	80-100
2.	Good	70-79
3.	Acceptable (fair)	60-69
4.	Poor	50-59
5.	Very poor	0-49

Table 2; The classification and score scale of students vocabulary achievement

From the 30 items of question on the students' vocabulary achievement test, the highest score was 30 (100) and the lowest was 0. Therefore, the score scale was 25-30 (80-100) classified to be very good, 20 – 24 (70-79) classified to be good, 15-19 (60-69) as fair/acceptable, 10-14 (50-59) as poor, and 0-9 (0-49) is classified as very poor.

G. Procedures of Data Collection

Collecting data means identifying and selecting individuals and gathering information by asking questions. To collect and analyze the data, the researcher used the two instruments vocabulary test and questionnaire. Vocabulary test consists of pre test and post test and questionnaire consist of close ended questionnaire.

1. The data from the vocabulary tests were collected to measure the vocabulary achievement of the student before and after treatment.
2. The data from questionnaires were analyzed to know the students' attitude on the application of contextual redefinition strategy.

H. Measurement Scale

The measurement scales from the questionnaire used in this research was the Liker's Scale as follow;

- | | |
|---------------------------------|-----|
| 1. Strongly agree | : 5 |
| 2. Agree | : 4 |
| 3. Fairly disagree (acceptable) | : 3 |
| 4. Disagree | : 2 |
| 5. Strongly disagree | : 1 |

(Creswell, 2012; 15)

I. Data Analysis

The data obtained from the vocabulary tests were processed by using SPSS software and t-test, then data from questionnaires were analyzes to know the attitude of the students on the application of contextual redefinition in teaching and learning vocabulary. To calculate the instrument of questionnaires, the following formula was used;

$$P = \frac{F}{N} \times 100$$

Where;

P: Percentage

F: The frequency of terms

N: Total sample

(Creswell, 2012; 16)

CHAPTER IV

FINDING AND DISCUSSION

This chapter contains of two sub-chapters; the findings of research, and the discussion of the findings of research. The findings of research are presented as the description of data. The discussion presents description of interpretation of research findings, and arguments of research findings.

A. FINDINGS

1. The Implementation of Contextual redefinition strategy is in Teaching Vocabulary for Pharmacy Students

In the present study, the first question in the problem statements proposed was how the contextual redefinition strategy is implemented in pharmacy class. To answer this question, the following description is the implementation of contextual redefinition strategy in vocabulary teaching for experimental group. There were 60 participants on this study from the second grade students of Pharmacy Department, Makassar Islamic University.

There were 30 students from MIPA Class A as treatment group which was taught vocabulary in using contextual redefinition strategy and 30 students from MIPA Class C as control group was taught vocabulary in

using conventional way. The instructor taught in the treatment group and control group in one and half hours and it was conducted eight meetings.

a. The first meeting

In the early meeting teacher greeted to the students as the opening section in the classroom. As the way in preparation phase, teacher asked them what were they expected in learning English actually, what language aspect was they needed and how do they study of vocabulary. Then, teacher told them to master English language well through contextual redefinition strategy as one of available strategy to enrich their vocabulary from the text.

After decided to introduce students with formatting strategy, teacher instructed the way to apply contextual redefinition by providing the lesson of contextual redefinition. He continued by giving them isolated terminologies adopted from the text and possible sentences. Then, informed students to use contextual redefinition by combining. Before closing the meeting, teacher asked students to bring dictionary in the next meeting.

b. The second meeting

In this meeting teacher provides contextual redefinition chart, lists of terminologies and reading material entitled "Healthy Eating and Vitamins" (Deborah, 2013). Students practiced by their selves in order to train to be independent learner and easily to expand this strategy. To

make clearly students works, they were given chance to do self recheck, verify the meaning of difficult words after reading, they can also use dictionary in verifying the meaning of unknown words. Then, there were evaluation and discussions. In this section students were given chances to share their experiences, taught, and suggestions.

c. The third meeting

In this meeting, there were two topics and activities. The first topic was “Vitamin”, and the second was “A Day in My Life” (Grice, 2003). The first activity was students asked to guess the meaning of difficult words to comprehend the idea of first text. The second activity was students asked to make new sentences with changing the words underlined without out of context.

Beside this activity can enrich students’ vocabulary, it also lead students to be brave, actively their cognitive and train to avoid plagiarism. The last session was still evaluation and discussion. This session can bring students to explore their ideas, compliments, and suggestions. Before closing the meeting, students were asked to make a short writing entitled “A Day in My Life”, it was self assignment and they were asked to collect in the next meeting.

d. The fourth meeting

In the fourth meeting, students were asked to guess the meaning of word lists in the chart of contextual redefinition. The text was different with

others; it was “Capsule” (Jenkins, 2002). Before reading the text intensively, students tried to predict the meaning of words and noted them in the column three. Then, verify the meaning of words after reading with filling them in the column four. The last session, students were given chance to make new sentences from the word lists in the chart.

e. The fifth meeting

The fifth meeting was carried out on June 7th 2013; it was same source of text in the fourth meeting. Contextual redefinition was still applied to guess the meaning of word lists provided by teacher in the chart. The topic of this meeting was “Tablets” (Jenkins, 2002). Students also were expected to expand this strategy in other activity out of class. Teacher gave them assignment to browsing other reading from internet and collect in the seventh meeting on June 21th 2013. Before class was closing, teacher gave short conversation in the drug store.

f. The sixth meeting

In the sixth meeting was students asked to guess the idea of reading entitled “Drug and Medication”. It was rarely different activity with others. Where, students were asked to list difficult words from the text by their selves. They tried to make chart of contextual redefinition then they were asked to explain each definition of words. In the end of meeting, they were asked to make self medication lists.

g. The seventh meeting

As the previous meeting before, students were asked to browsing the health news or article from internet and bring to the class. Teacher was a facilitator, he asked every student to make a text meaning prediction. They were trained to use the contextual redefinition strategy by their selves.

h. The eight meeting

In the eight meeting, teacher instructed them to guess the meaning of difficult words from text through contextual redefinition strategy in group work. It was different way, because the text was too long and the students not only asked to guess the meaning of new words, but they were also asked to find out the synonyms and the antonyms of words. Then, each group presented their works in front of the class and verified the correctness of words meaning. This way aimed to train the students to work in group. In the end of study, the teacher was registering post test and questionnaires.

2. Contextual Redefinition Strategy in Improving the Pharmacy Students' Vocabulary Achievement

a. The result of vocabulary test

To know the contextual redefinition strategy contribution to the improvement of the students' vocabulary, the researcher gave two tests (pre test and post test). The students were given pre-test to know the

students' score before treatment. We can see the students' score after treatment for treatment group, and we can compare the students' pre test and post test score for control group, they are presented in the tables below:

1) The students' pre test score before treatment

Classification	Average Score	Frequency	Percentage
Very good	80-100	-	0,0
Good	70-79	1	3,3
Acceptable	60-69	3	10
Poor	50-59	1	3,3
Very poor	0-49	25	83,4
		30	100,0

Table 3; The students' pre test score before treatment

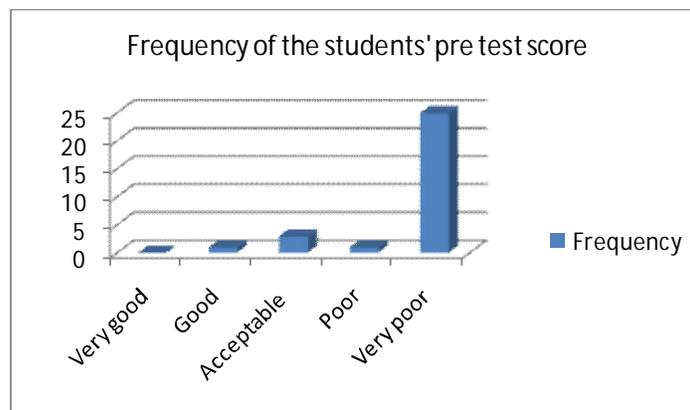


Figure 3; The frequency of students' pre test score

The table and figure above show students' pre test score before treatment, in which there was 1 (3.3 %) in good score, 3 (10 %) fair score, 1 (3.3 %) poor score and 25 (83.4%) very poor score. It can be seen from these pretest results that students' mean score of pre test result for experimental group was in very poor category.

2) The students' post test score after treatment

Classification Students' Score	Average Score	Frequency	Percentage
Very good	80-100	-	0, 0
Good	70-79	4	13, 3
Acceptable	60-69	7	23, 3
Poor	50-59	11	36, 7
Very poor	0-49	8	26, 7
		30	100, 0

Table 4; The students post test score

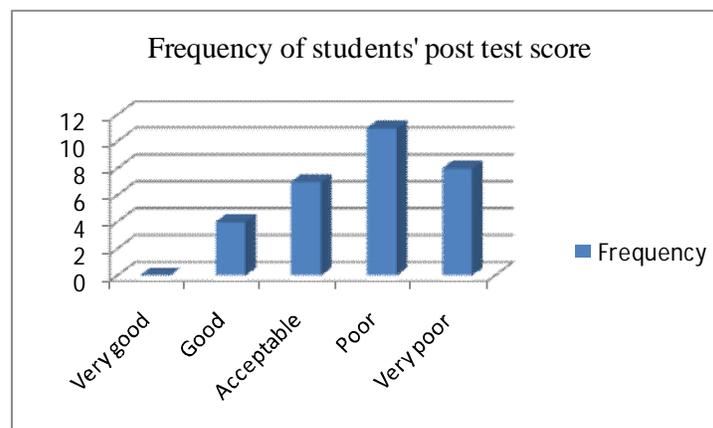


Figure 4; The students' post test score

The table and figure above show the frequencies of students' scores after treatment increased even though there was no student that got good to excellent (very good) score. There were 4 (13.3%) of respondents got good score, 7 (23.3%) of respondents got fairly good (acceptable) score, 11 (36.7%) of respondents got poor score, and 8 (26, 7 %) of respondents got the very poor score.

b. The overall score

	Pre Test		Post Test	
	Total Score	Mean Score	Total Score	Mean Score
Treatment group	1103	36,7667	1618	54,1467
Control group	1274	42,4667	1454	48,4667

Table 5; The overall of students' score

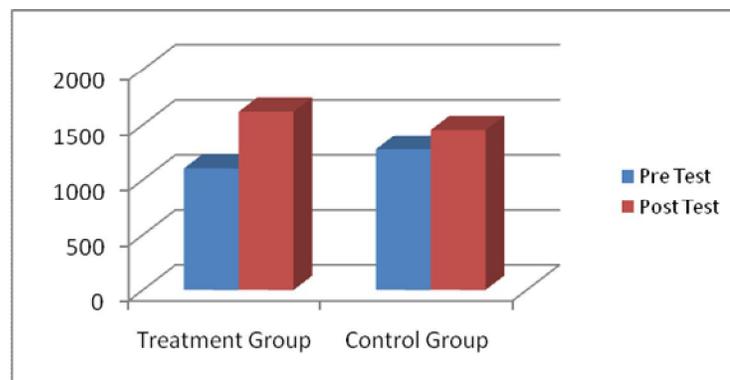


Figure 5; The diagram of overall students' score

The diagram above indicates an improvement for both of treatment and control groups from pre-test to post-test. The score increased from 1103 in pre-test to 1618 in post-test. The overall students' score showed that there was an increase in mean score from 36.7667 in pre-test to 54.1467 in post test for treatment group and from 2.4667 to 48.4667 for control group.

c. The significance of CR Strategy in improving the students vocabulary by using SPSS and t-test

To know the significance of CR Strategy in improving the pharmacy students' achievement, the students were given pre-test, treatment and

post-test with the percentage indicators. It also compare between treatment and control group. Data obtained from the tests were then processed by using SPSS and t-test was interpreted based on the statistical principle.

Paired Samples Statistics					
		Mean	N	Std. Deviation	Std. Error Mean
Pair 1	Pre test for Control	42.4667	30	13.88806	2.53560
	Post test for Control	48.4667	30	12.87803	2.35120
Pair 2	Pre-test for Treatment	36.7667	30	14.79208	2.70065
	Post-test for Treatment	54.1467	30	11.66598	2.12991

Table 6; Paired samples statistics

The table above shows the mean pre-test score of students in experimental group (36.7667) is categorized as very poor and in control group (42.4667) is also categorized as very poor. Based on the statistic table above can be concluded that the students' mean score in experimental group is the same level with the control group. In other words means score of experimental group and control group are in relatively the same level.

Based on the calculation of statistic data, it was shown that there were 6.0000 increases in students' score for control group, but for treatment group there were 17.3800 increases in the students' score after treatment. It means that CR strategy as independent variable influenced to the improvement of pharmacy students' vocabulary achievement as

dependent variable. To know the students' mean score of pre-test and the difference, we should decide whether it is statistically significant. To answer such questions, the researcher applies independent sample t-test which is analyzed by using SPSS. As can be seen from the table below;

Paired Samples Test			
		Paired Differences	
		95% Confidence Interval of the difference	
		Lower	Upper
Pair 1	Pre test and Post test for control	-11.45630-	-.54370-
Pair 2	Pre-test - Post-test for Treatment	-21.60123-	-13.15877-

Table 7; Paired differences samples test

The table 7 above shows the paired differences of both of tests and confidences interval of the difference. For control group, there were -11.45630 (lower), and -54370 (upper). For treatment group, there were -21.601233 (lower), and -13.15877 (upper). So that, there were interval differences both of group.

d. The t-test result of both of groups

Test Statistics ^b		
	Pre test and post test for control	Pre test and post-test for treatment
Z	-2.229 ^a	-4.490 ^a
Asymptotic. Sig. (2-tailed)	.026	.000
a. Based on negative ranks.		
b. Wilcoxon Signed Ranks Test		

Table 8; The t-test result

Based on the statistics test in asymptotic significant (2-tailed) column, in relation to the finding of pre test, 1.0 is greater than .000. This means that alternative hypotheses, H_0 is rejected and H_1 is acceptable on significant level. Those experimental and control group have the same ability or relatively the same level in vocabulary achievement before treatment.

In other words, there is no significant different from pre test both of groups. Since the base level of the students' pre test score was the same level, the treatment was conducted to both of groups. The experimental group was taught vocabulary in using contextual redefinition strategy and control group was taught vocabulary in using conventional way.

e. The frequencies

Statistics					
		Pre test for Control	Post test for Control	Pre-test for Treatment	Post-test for Treatment
N	Valid	30	30	30	30
	Missing	0	0	0	0
	Mean	42.4667	48.4667	36.7667	54.1467
	Std. error of Mean	2.53560	2.35120	2.70065	2.12991
	Median	41.5000	50.0000	36.0000	53.4000
	Mode	33.00a	63.00	23.00	50.00a
	Std. Deviation	13.88806	12.87803	14.79208	11.66598
	Range	57.00	50.00	53.00	50.70
	Minimum	13.00	23.00	20.00	26.00
	Maximum	70.00	73.00	73.00	76.70
a. Multiple modes exist. The smallest value is shown					

Table 9; The statistics' frequencies

3. The pharmacy student's attitude on the application of CR strategy.

The description of learner's answers from the questionnaires are presented in the form of frequency table then interpreted. There are 20 items and divided in two parts. These are positive statements and negative statements. Statement number 1 until 10 are positive statement and from 11-20 are negative statements. Whereas the negative statements are be intended to support the idea of positive statements.

a. Positive statements

- 1) Statement 1: The teaching vocabulary is very effective for ESP class like English for pharmacy.

The result of students' responses to statement number 1 that, there were 73, 3% of respondents agree to this statement. Pharmacy students are expected to master English well but they don't have enough vocabulary. Most of them are interested if English teacher provides terminologies. There was no students disagree towards this statement as see in diagram below;

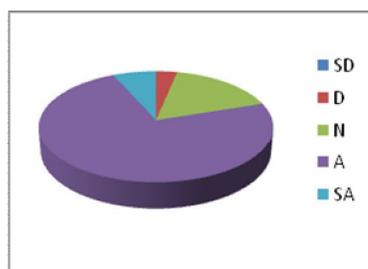


Figure 6; The diagram of statement number 1

2) Statement 2: I agree if vocabulary teaching in ESP class applies contextual redefinition strategy

For statement number 2, students agreed if teacher applying contextual redefinition to improve students' vocabulary. There were 23, 3 % students strongly agree, 63, 3 % agree and only 3, 3 % disagree as can be seen on the diagram below;

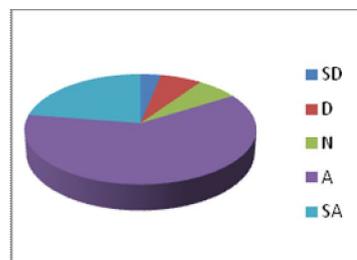


Figure 7; The diagram of statement number 2

3) Statement number 3; Learning vocabulary in using CR strategy is very interesting for me

For statement number 3, students were very interested in learning vocabulary by using contextual redefinition strategy. There were 30.0% students strongly agree, 56.4% agree and only 3.3 strongly disagree. It means that most of students were interested learning vocabulary by using contextual redefinition strategy as can be seen in the diagram below;

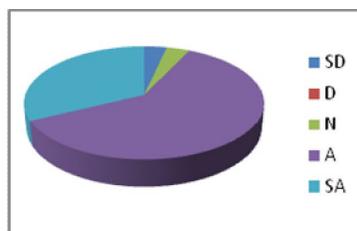


Figure 8; The diagram of statement number 3

4) Statement number 4; CR strategy can improve my vocabulary knowledge well

The students' perceptions on this statement that, teaching English in the English for Pharmacy class through contextual redefinition strategy can improve the students' vocabulary well. There were no students disagree toward this statement, it means that they agreed if Contextual Redefinition strategy was used by the teacher in teaching vocabulary. The percentage of the students' perceptions can be seen from the diagram below.

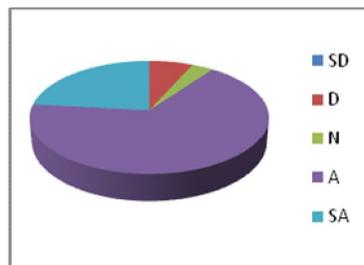


Figure 9; the diagram of statement number 4

5) Statement number 5; I really enjoy in learning vocabulary by using CR strategy

Refers to students' responses to this statement, actually they enjoyed in learning vocabulary through CR strategy. There were no students strongly disagree, 3.3 % disagree and 16.7 % neutral. Otherwise they agree if learning vocabulary by using this strategy as can be seen the distribution of the students' perception as the diagram below;

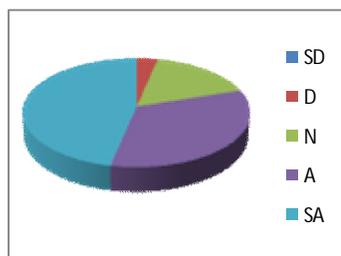


Figure 10; The diagram of statement number 5

6) Statement number 6; I get new knowledge in the application of contextual redefinition strategy

Statement number 6 describes the students' perception on about the usage of contextual redefinition strategy in vocabulary learning. There were 23.3% respondents agree and 13.7 strongly agree and there were no students answer disagree, but most of them in point of agree and strongly agree as can be seen in the diagram below;

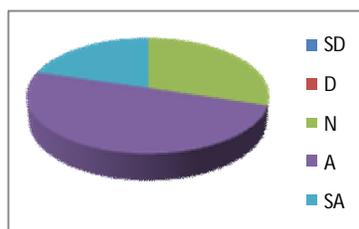


Figure 11; The diagram of statement number 6

7) Statement number 7; I agree if the teaching English especially for vocabulary subject should apply the CR strategy

The statement above invites English teacher to apply CR strategy especially in improving students' vocabulary. There were 50 % agree, 33.3 % strongly agree and there were no respondents strongly disagree as can be seen on the diagram below;

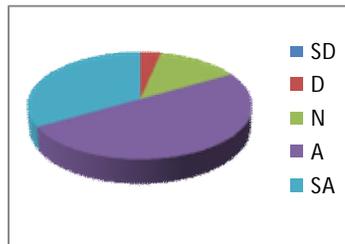


Figure 15; The diagram of statement number 7

- 8) Statement number 8; CR strategy is very appropriate for teaching and learning vocabulary in GE and ESP class

For the statement number 8, there were varied perceptions. The students' responses that no one strongly disagree and 60 % agree if CR strategy was appropriate for teaching and learning vocabulary both of general English class or ESP class as can be seen in the diagram below;

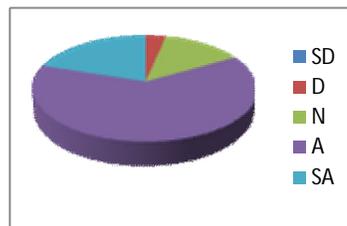


Figure 13; The diagram of statement number 8

- 9) Statement number 9; I agree if the teacher provide reading material for application the CR strategy before come to the class

The students' responses on this statement were most of them agree if teacher should prepare reading material before give the instruction. There were 36, 7 % of students strongly agree, 53, 3% agree, and 6.7 % of them disagree as can be seen from the diagram below;

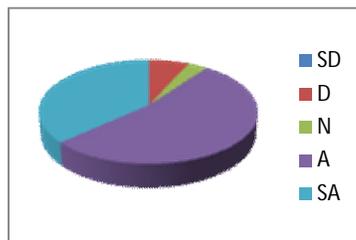


Figure 14; The diagram of statement number 9

10) Statement number 10; I guess the meaning of new words by redefine contextually

Statement number 10 shows that by using CR strategy in vocabulary learning the students will guess the meaning of new word from text. There were 23.4% students strongly agree, 53.3 % agree and only 10 % of them disagree, as can be show in the diagram below;

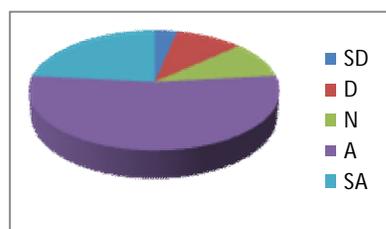


Figure 15; The diagram of statement number 10

b. Negative Statements

1) Statement 11; It is not effective to teach vocabulary for ESP class

The statement number 11 shows the students responses toward ineffective of teaching vocabulary for ESP class as well the English for pharmacy. Where, 36.6 % of respondents strongly disagree and 23.4 % disagree. Most of pharmacy students also need to comprehend the terminologies related to their field like medicine or other terminologies. As

we look at the distribution of diagram below, only 6.6 % of respondents stand for strongly agree.

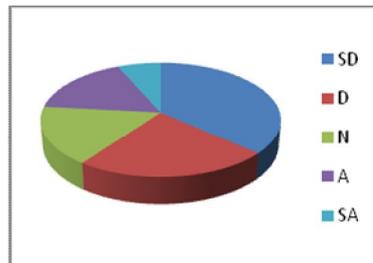


Figure 16; the diagram of statement number 11

- 2) Statement 12; I disagree if applying CR strategy in teaching vocabulary in ESP class

The statement number 12 is negative statement towards the application of CR strategy on ESP class. There were 23.4 % of respondents strongly disagree, 36.6 % disagree, some of them neutral and only 3.3 % of them strongly agree as describes in the diagram below;

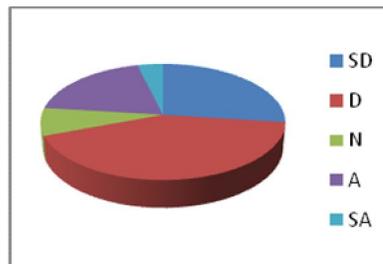


Figure 17; The diagram of statement number 12

- 3) Statement 13; It is not very interesting if learning vocabulary through CR strategy

Statement number 13 is also negative statement, it is relatively same as with the statement number 12 above, where, there were 26.7 % of respondents strongly disagree, 36.6 % disagree, and 13.3 % agree.

Can be said that students support the CR strategy were very interesting in learning vocabulary. As can be seen the diagram below;

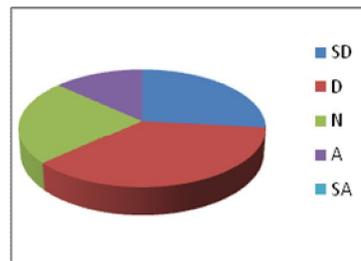


Figure 18; the diagram of statement number 13

- 4) Statement 14; the application of CR strategy doesn't improve my vocabulary knowledge well

This statement refers to the idea of CR strategy doesn't improve the students' vocabulary knowledge well. Nearly a half of respondents give strongly disagree. There were 43.3 %, 26.7 % disagree, 26.7 % neutral, 3.3 % strongly agree, and there were no students agree. It means that in teaching vocabulary by using CR strategy can improve the students' vocabulary knowledge well, as can be seen in the diagram below;

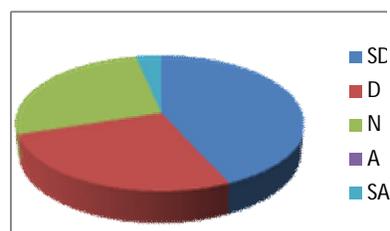


Figure 19; The diagram of statement number 14

- 5) Statement 15; It is not enjoyable if learning vocabulary through the CR strategy

Statement number 15 refers to the students' attitude towards the application of CR strategy in learning vocabulary. There were 40 % of

respondents disagree, 30 % strongly disagree, 16.7 % neutral and 3.3 % strongly agrees. It means that they enjoy about the learning vocabulary by using CR strategy, as can be seen the distribution or percentage of the students' statements below;

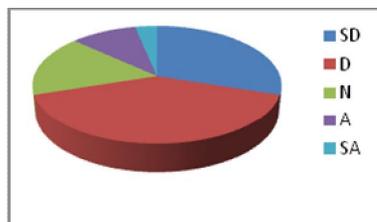


Figure 20; The diagram of statement number 15

6) Statement 16; I didn't get new knowledge when applying CR strategy

The students will get new knowledge when applying the CR strategy but this statement number 16 is negative statement. Most of respondents had negative responses to this statement also, there were 33.4 % of them strongly disagree, 26.7 % of them disagree and only 3.3 % agrees. It means that they disagree to this statement, and they get new knowledge when they apply the CR strategy in learning English in or out of class as can be seen in the diagram below,

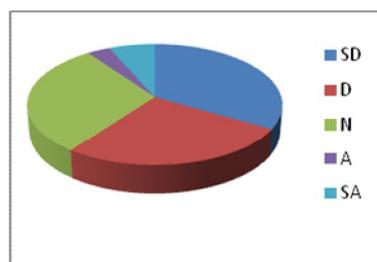


Figure 21; The diagram of statement number 16

7) Statement 17; I disagree if teaching English especially for vocabulary subject is using CR strategy

The statement number 17, the respondents support the CR strategy on English teaching. There were 33.3 % of respondents strongly disagree, 43.4 % disagree, 26.7 % neutral, 6.6 % agree, and there was no respondent strongly agree. It can be assumed that almost respondents agree if teaching English use CR strategy based on the distribution of students' statement in the diagram below;

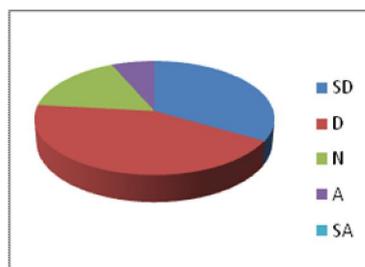


Figure 22; The diagram of statement number 17

8) Statement 18; CR strategy is not appropriate for teaching vocabulary in GE Class and ESP class

This statement shows us the CR strategy is appropriate or not for teaching vocabulary in general English class and in English for specific class like English for pharmacy. We can see the distribution of their responses in the diagram below; where, 23.4 % of respondents strongly disagree, 40 % disagree, 16.7 % neutral and only 6.6 % strongly agree.

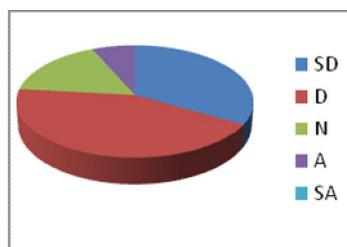


Figure 23; The diagram of statement number 18

- 9) Statement 19; I disagree if teacher provide reading material for application the CR strategy before come to the class

The students' responses on this statement that almost students agree if teacher provide the reading materials for apply CR strategy. Otherwise, there were 23.4 % strongly agree, 50 % disagree, and 26.6 % in the point of neutral. As can be seen the diagram of respondents' statements below;

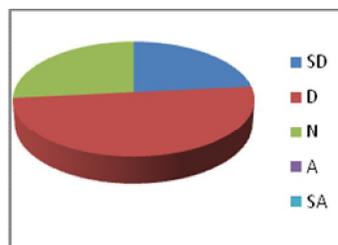


Figure 24; The diagram of statement number 19

- 10) Statement 20; I didn't guess the meaning of new words by redefine contextually

The statement number 20 that CR strategy in vocabulary teaching the students do not guess the meaning of new words. As can be seen the idea of respondents that, there were 26.7 % strongly disagree, 30 % agree, 26.7 % neutral. Even though there were 16.6 % agree, but we can assume that they can guess the meaning of new words by redefine contextually, as diagram shows below;

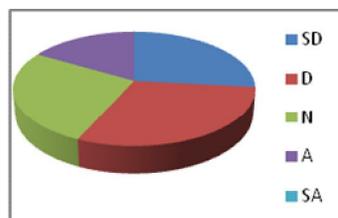


Figure 25; the diagram of statement number 20

B. DISCUSSIONS

The discussion deals with argumentation and interpretation of the research data. There were three questions needed to be answered in this study, the first question was, how is the contextual redefinition strategy implemented in vocabulary teaching for pharmacy class? The second question was, how does the contextual redefinition strategy improve the pharmacy students' vocabulary achievement? And the last question, what is the pharmacy student's attitude on the application of contextual redefinition strategy.

1. The Implementation of CR strategy in pharmacy class

There were eight meetings in teaching vocabulary for pharmacy class, and each meeting had duration of one half hour. MIPA Class A as treatment group was taught vocabulary learning through contextual redefinition strategy. Teaching vocabulary for pharmacy class through contextual redefinition strategy was something new for pharmacy students because ESP teacher in English for pharmacy class still teach English grammar especially for Pharmacy Department of Makassar Islamic University. Grammar is the main focus for ESP teacher without teaching specific terminologies to the students.

This case made the researcher was interested to propose vocabulary learning strategy in English for pharmacy class. According to Weda (2007) that the failure of English foreign learner in mastering of four

language aspects are on their vocabulary learning strategy, habits and teacher's instruction. So, in the early meeting teacher told to the students that if the students want to acquire English language well, they should enhance their vocabulary through obtainable strategy.

Vocabularies can be gained from literature given that pharmacy students are dealing with pharmaceutical literature in their daily activities such as in the laboratory, hospital and pharmaceutical industries. Contextual redefinition strategy has been proposed by some experts to enhance the students' vocabulary; it could help students to try making prediction from the text before reading intensively. In addition, this strategy can help students to develop their terminological knowledge the students also can guess the meaning of new words from literature in long term memory.

Teacher introduced the contextual redefinition strategy to be implemented. He explained the procedures of contextual redefinition strategy, by showing how did the example of contextual redefinition work in the class room. The main purposes of this strategy were how the students can easily understand the meaning of new or unfamiliar words from literatures and how the students can activate their cognitive by predicting the meaning of new words.

For the initial implementation, teacher identified unfamiliar words from the text and then wrote them in isolation or in the chart before the students started the reading activity. Teacher also gave an example of

contextual redefinition works and possible sentences in order to help students to implement this strategy well. These unfamiliar words were intended to help students to cover the idea of text after an intensive reading. Reading materials and the chart of contextual redefinition strategy were given to the students one by one when the class will be begun (see appendix VII and VIII).

Formally the chart of contextual redefinition (CR) strategy was provided to assist the students to predict the meaning of new words contextually. By following the CR strategy chart a student will be an independent reader because this chart can lead them to activate their cognitive. This chart consisted of various columns; word lists column, rating column, predicting meaning before reading column, meaning after reading column and context clues column.

Lists of terminologies in the first column such as “pharmacy, drug, medicine, medication, ingredients, vitamin, prescription, nutrition, etc” were proposed to be assistance in guessing the meaning of context easily. In the rating column students were invited to put 0, 1, or 2. Point - 0 if they don't know of the word, point 1 if they know the meaning, and point 2 if they know and use the word. After listed of those terminologies, students could write in possible sentences if they are in the point 1 and 2. It involved helping students to predict the meaning of difficult words which found from the text.

Students have to arbitrarily predict the meaning of new words before they read the literature and write the prediction in the third column. For the next task, students were invited to read intensively the text and students could place a check if their definitions remain the same in the fourth column or they could verify the meaning of those word lists by using dictionary and out them. To make clear the students understanding about these difficult words, they were invited to list any context clues in fifth column. For the example the context clues of medicine is “for health” as we seen in the appendix XVI of the students’ works.

After the instruction, teacher involved the students in practicing the contextual redefinition works. These students’ works in the chart were very helpful for students to guess the meaning of unknown words and can easily understand the idea of context. There were various topics and activities in each meeting; for example in the second meeting students were asked to make new possible sentence contextually from the underlined words. This activity was intended for the students to be able to redefine the meaning of words and train students to apply these words in possible sentences. It was individual works, even though they can work with a partner or whole class like in the eight meeting activity.

In the third meeting, there were two topics and activities. The first topic was “Vitamin”, and the second was “A Day in My Life” (Grice, 2003). The first activity in this meeting was the students asked to guess the meaning of difficult words to comprehend the idea of first text. The second

activity was the students asked to make new sentences by changing the underlined words without out of context. Beside this activity can enrich students' vocabulary, it also stimulates students to be daring, activate their cognitive and train to avoid plagiarism. There were evaluation and discussion; they can bring students to explore their ideas, compliments, and suggestions. Before closing the meeting, students were asked to make a short writing entitled "A Day in My Life", it was an individual assignment and free writing, students were asked to submit it in the next meeting.

The fourth meeting was not significantly different from the other meetings; it was only the topic of reading that was different. Students were asked to guess the idea of text "capsule" (Jenkins, 2002) and meaning of word lists in the chart of contextual redefinition. Before reading the text intensively, students tried to predict the meaning of words and noted them in the column three. Then, they verify the meaning of words after reading by filling them in the fourth column. Students were also given chance to make new sentences from the word lists in the chart and present them in front of the class.

On June 7th 2013, the fifth meeting was carried out; the source text used was just the same with that in the fourth meeting. The topic of this meeting was "Tablets" (Jenkins, 2002). Students were expected to guess the idea of text and guess the meaning of new words in the chart. Students were also expected to expand this strategy in other activity out of

class. It was an individual work and the students seemed enjoy this activity. Beside this activity teacher gave short conversation taking place in a drug store. Teacher gave them assignment to search other reading materials from the Internet and submit it in the seventh meeting on June 21th, 2013.

In the sixth meeting students were asked to guess the idea of reading entitled "Drug and Medication" (Grice, 2003). It was not significantly different from the other meetings. Students were asked to list difficult words from the text individually. They tried to make chart of contextual redefinition and then they were asked to explain each definition of words. In the end of meeting, they were asked to make individual medication lists, it was free writing to develop their self confidence.

Like the previous meetings the before "fifth meeting", students were asked to browse the health news or articles from the Internet and bring them to the class. In this activity, teacher was a facilitator, he asked every student to make a text meaning prediction. They were trained to use the contextual redefinition strategy by themselves. The seemed could not do this activity well by themselves. Students need extra time to apply and expand this strategy.

In the eight meeting, teacher instructed them to guess the meaning of difficult words from text through contextual redefinition strategy in group. This activity was quite different from previous activities, because the text was too long and the students asked to not only guess the meaning of

new words, but also to find out the synonyms and the antonyms of words. Then, each group presented their works in front of the class and verified the correctness of words meaning. This way aimed to train the students to work in group. In the end of study, the teacher was registering post test and questionnaires.

According to Nation (1990; 160) that learning vocabulary through guessing words in context, students can use reading skills to developed the meaning of unknown words. Supported by Tierney et.al (1990; 197) that reading intensively can help students to achieve the vocabulary meaning from the literature, beside that they will keep the meaning of unknown words in long term memory. Contextual redefinition study with combining the reading intensively was very helpful and gave awareness to the students.

In predicting meaning of difficult words from the literature or reading material, students can define them by using synonym, antonym, possible sentences or context clues. As Nation (2001) proposed to guess the meaning of new words or difficult words from the context through direct meaning, possible sentences, synonyms, antonyms or context clues. Contextual redefinition strategy seems interesting for pharmacy students because it can help them in predict meaning of pharmacy literature and they can achieve the terminologies inside or outside of classroom. The reading materials were also familiar for them, such as healthy eating, vitamin, tablet, capsule, prescription, medicine, etc.

Students were in very high enthusiasm to join this study, because students could implement well the contextual redefinition lesson in each meeting (see appendix XVI). In addition to enrich the students' vocabulary, these activities also motivate students to be dare, activate their cognitive and train to avoid plagiarism.

2. Contextual Redefinition Strategy in improving the Pharmacy students' vocabulary achievement

During the study period, students were asked to report what they have done with the application of contextual redefinition strategy in the classroom. Since the application of this strategy as vocabulary learning strategy, the students were asked to follow the contextual redefinition lesson include the formulation of contextual redefinition chart and sentences usage as the productive aspect. Pharmacy students were enjoying this study well as we can see from the result of students' works in the appendix XVI.

The procedure of this study involved the researcher applying three steps. The first step was pre-test. The pre-test was carried out to assess the students score before treatment. The second step was the treatment. In the treatment step, teacher taught vocabulary through contextual redefinition strategy and the last step was post-test. The procedure was implemented to MIPA Class A as the treatment group in order to see the students' vocabulary achievement. The results was then compared the result of MIPA Class C score as control group which were taught

vocabulary learning strategy through conventional way without giving them contextual redefinition strategy.

Academically, pre-test was given to know the students' prior knowledge before teaching, while post-test was aimed to measure the students' vocabulary achievement after taught with vocabulary learning strategy. If we looked at the test sheets in the appendices 1 and 2, there were 30 questions in 25 minutes given to the students. There were 3 items of test: Definition, Synonym, and Word in Context which were adopted from "Hill (2009) Word Power 15000 and 45000, and from Basic English Vocabulary Level Test (2013)".

Actually, those tests were acceptable for Pharmacy students, almost of the test contents deal with health and general field. It seems that they were familiar to them (appendix 1 and 2). In addition, the research was made in different subjects, but in the same number and the same level. The figure 7 showed the classification of pharmacy students' vocabulary. Both of groups were classified in the very poor level. Where the pre-test score of students in the treatment group were 1103 and the post test score of students were 1618.

There was an improvement students' vocabulary achievement, it was 51.5 % after they were taught vocabulary in contextual redefinition as available vocabulary learning strategy. Whereas in the control group the pre-test score was 1274 and the post test score was 1454. There was 18.0% improvement also after taught vocabulary through conventional

way. But the students' vocabulary achievement score in the treatment group are higher than in the control group. It means that contextual redefinition strategy could improve the students' vocabulary achievement well.

Contextual redefinition strategy was expected by pharmacy students to overcome some English learning problems such as lack of vocabulary achievement. It influences the other language learning aspects. These aspects include the students' comprehension in comprehending the pharmacy literature. Through the contextual redefinition study, pharmacy students were helped to improve their vocabulary knowledge well, beside that it will also make them freely to make meaning prediction from the text.

Actually the aim of ESP teaching is to fulfill the students' needs. Where English as a tool to achieve their particular needs. In the case of pharmacy students, they need to learn English as a way to achieve one of their particular needs. Contextual redefinition strategy was proposed by Tierney et.al (1990) designed to unlock meaning of unknown word or difficult words from the text, it was taught to improve the students' vocabulary achievement. In conducting this study, the students could actively their cognitive because this study not only focused the input or the output but the process of learning is very important for the students. Most of the researcher before like Nurbaya (2005) and Wiese (2012) combined the Jean Piaget "cognitive theory" as the approach for their study.

a. The result of vocabulary test

As discussed above, the result of students' vocabulary test was categorized as poor to acceptable. The description of the data collected through the test as explained in the previous section shows that the students' vocabulary achievement improves significantly. It was supported by the mean score of the students' pre-test and post-test in the experimental group. The mean score of the students' pre-test and post-test score in the experimental group increased from 36.7667 to 54.1467. The mean score of post-test was higher than pre-test; there were -17.3800 paired differences of means score, and there were 11.30466 paired difference of standard deviation.

The pre-test for the treatment group indicated that there were 25 (83.4%) students got very poor score, 1 (3.3%) student got poor score, 3 (10%) students got fairly good score, and there was 1 (3.3%) student got good score. The result of pre-test score indicated that the competences of pharmacy students of Makassar Islamic University was in the very low achievement before taught vocabulary learning strategy through contextual redefinition.

After contextual redefinition strategy was taught in eight meetings to the treatment group, the score of students improved to 51.5%. There were 4 (13.3%) students got good score, 7 (23.3%) students got fairly good, 11 (36.7%) students got poor score, and only 8 (26.7%) students got very

poor score. Even though there were no students got excellent, but it can be seen from the figure 3 that there was significant improvement.

If we look at the statistics test (the table 14) in **asymptotic significant** (2-tailed) column, in relation to the finding of pre test, 1.0 is greater than .000. This means that H_0 is acceptable and H_1 is rejected on significant level. The experimental and control group have the same ability or relatively the same level in vocabulary achievement before treatment. In other words, there is no significant different from pre-test both of groups. But after the students were given treatment, H_0 was rejected and H_1 was acceptable, where, contextual redefinition in the treatment group significantly influences the vocabulary achievement of the Pharmacy as ESP students at Makassar Islamic University.

Based on the standard deviation of both groups of the experimental group and control group, the standard deviation of experimental group was higher than control group in the point of pre-test. The standard deviation of experimental group was 14.79208, while control group was 13.88806. At the post-test, the standard deviation of experimental group was lower than control group.

Where, the standard deviation of experimental group was 11.66598, while the standard deviation of control group was 12.87803. The smaller standard deviation shows how closer the gain score to the mean was. Therefore, the experimental group scores were closer than control group at the post-test.

b. The overall score

The mean score of experimental group and control group increased after they were given treatments. The experimental group learned vocabulary by using contextual redefinition strategy while the control group learned vocabulary by using conventional strategy without giving them contextual redefinition strategy. As Tierney et.al (1990) stated that learning English by using contextual redefinition strategy is more effective for the university student who wants to increase their vocabulary and comprehension but it needs to spend their time. Wiese (2012) have assessed the two strategies between contextual redefinition strategy and Word Association and the both of strategies can improve the students' vocabulary well, but he applied them in senior high school students.

The control group score for pre-test was 42.4667 increased to 48.4667 (post test), it improved about 6.0%. Whereas, the treatment group scores for pre-test were 36.7667 increased to 54.1467 (post test), and it improves about 17.380 %. When comparing the total scores both of the treatment and control group, it was observed that the treatment group score is higher than control group score.

English vocabulary teaching in university level needs a suitable strategy, as Nation (1990; 159) affirmed that if a teacher will help students handle with low frequency vocabulary, he is better to spend time to concentrate on vocabulary teaching strategies for dealing with unknown vocabulary by using contextual redefinition strategy or other available

strategies. As an ESP teacher, a teacher should be creative to teach vocabulary to the students, like Pharmacy students.

Pharmacy students who were taught vocabulary learning strategy through contextual redefinition can improve their vocabulary achievement well. Even though there were no students got very good score, but it can be confirmed that this strategy can improve the students' vocabulary. As can be seen from the table 4, there were 4 students that have good score (3 students of MIPA A, 27 students of MIPA A, 28 students of MIPA A, and 30 students of MIPA A). The table 3 listed the pre-test students' score; there was only one student that has good scored (the student MIPA A 30).

3. The Pharmacy student's attitude towards the application of contextual redefinition strategy.

To know the students attitude after giving them treatment, questionnaire was the available way to use. The questionnaire was aimed to know the respondents' responses toward the application of a theory of teaching, method or strategy of teaching. According Creswell (2012; 174) when the researcher want to collect secondary data on an instrument or a checklist, she/he will needs some system for scoring data, include the attitude indication. He added that to calculate the instrument of questionnaires, or to know the percentage of respondents we can formulated by divided the frequency of terms to total sample and calculated to hundred as discussed in the previous chapter.

For this study, the researcher used the Liker's Scale to check the appropriate response from each statement. Where, the respondents have opportunity to select a score of their choice, including "strongly agree", "agree", "neutral", "disagree", and "strongly disagree". For this study the researcher divided the statements into two types of statement; positive side and negative side, in order to strengthen their idea. Negative statement was aimed to support the students' responses on the positive statement. There were 10 statements for positive side and 10 statements for negative side.

a. Positive statements

The distribution of students' responses towards this statement can be seen from the figures 6, in which almost students agree if teaching vocabulary was very effective to be taught in the English for Pharmacy class. Some of Pharmacy students said that vocabulary knowledge was very important for them as the main core in improving of their language competences. But in learning vocabulary automatically needs strategy which is available for them, based on the students' responses on the statement number 2 that they agreed if teaching vocabulary on English for Pharmacy class applies contextual redefinition strategy.

The distribution of students' responses, as shown in figure 7, indicated that there were 63.3 of students agree, 23.3% of students strongly disagree, and only 6.7 % of students disagree towards the application of contextual redefinition strategy on the teaching vocabulary

for English for pharmacy class. It means that most of students were very interested and enjoyed the application of contextual redefinition strategy.

In addition, contextual redefinition strategy can improve the students' vocabulary knowledge well, they can guess the meaning of new words which they get from reading without open the dictionary or asking to the other, beside that they also can get new knowledge. It means that the contextual redefinition strategy could help the students inside or outside of the classroom to guess the meaning of new words contextually even though it is not very appropriate with the transliterate meaning.

b. Negative statements

The negative statements of this questionnaire were intended to supports the students' attitude toward the application of contextual redefinition strategy in English for Pharmacy class. Based on the distributions of these negative questionnaires, most of Pharmacy' students strongly disagree to the negative statements. There were a half of them in the point of strongly disagree. For the first negative statement that there were 36.6% of respondents strongly disagree, 23.4% of respondents disagree, 16.7% of respondents neutral and agree, and only 6.6% of respondents strongly agree.

The idea of respondents for the first negative statement above was represent to the other negative statements. As can be seen from the figures 19, 20, 21, and 22 that most of Pharmacy students disagree and strongly disagree, and only a few of them agree to these negative

statements. It means that they support and agree to the positive statements. Actually no one claimed that if one of vocabulary learning strategy can improve the students vocabulary well, without really treat to the sample.

As Tierney et.al (1990) stated that contextual redefinition as a vocabulary learning strategy which available for all grade of students. During the study, it improves the students' vocabulary knowledge in long term memory. Where, Pharmacy students have tried about several meetings and commented that contextual redefinition strategy can be applied in learning vocabulary in English for pharmacy class.

CHAPTER V

CONCLUSION AND SUGGESTION

This chapter contains two sub-chapters; conclusions and suggestions.

A. CONCLUSION

The implementation of contextual redefinition strategy in pharmacy class was designed to help pharmacy students in using context to unlock the meaning of unknown words from the pharmacy literature and to improve the students' vocabulary. Based on the data analysis in chapter IV, it can be concluded that; firstly, during the study of CR strategy in English for pharmacy class could leads students to be independent learners inside and outside of the classroom as long as they used the procedure of CR strategy. CR strategy was applicable for ESP class or English for pharmacy class. Besides that, the implementation of CR strategy was received well by pharmacy students of Makassar Islamic University because the main purposes of this study not only focused on the output but the most important that the process of vocabulary learning.

Secondly, the use of contextual redefinition strategy in teaching vocabulary gave positive affect for pharmacy students. For experimental group, there was an increasing of students' vocabulary achievement.

Where the means score of the students pre test were 36.7667, and the post test were 54.1467. Based on the improvement of the score indicate that the students' terminological knowledge improve well. Since the application of this strategy will bring the students more freely in learning English, beside that they will actively their cognitive because they have awareness to predict the meaning of difficult words contextually.

Thirdly, the distribution of students' responses on the application of CR strategy that there were various students' perspectives, but almost pharmacy students agree if CR strategy applied in ESP class. During the study the students of pharmacy UIM were very interesting, enjoying to the application of CR strategy and absolutely they could apply in self work or group work.

B. SUGGESTION

In this sub chapter the researcher enclose some suggestions based on the result of the research. The researcher proposes some suggestions concerning to the research findings. There are some points of suggestions; firstly, for next researcher who is interested to concern on vocabulary learning strategy need to understand the students' needs before giving them treatments in order to can formulate in a suitable way of teaching.

Secondly, it is important to investigate also the two of vocabulary learning strategy, and compare them which one of suited can transferred

vocabulary well in long term memories. Thirdly, in teaching English for non English department needs someone who is expert in that field or experienced English teachers who know more of that field in order to achieve the expected the teaching goals.

BIBLIOGRAPHY

- Allen, Janet. 2007. *Inside Words; Tools for Teaching Academic Vocabulary, Grades 4-12*. Steen House Publisher.
- Brown, H. Douglas, 1994. *Principles of Language Learning and Teaching*. San Francisco: State University Press.
- Creswell, John W, 2012. *Educational Research; Planning, Conducting, and Evaluating Quantitative and Qualitative Research*. International Edition. Fourth Edition. Boston: Pearson Education Press.
- Creswell, John W, and Clark, Plano, Vicki L. 2007. *Design and Conducting Mixed Method Research*. New Delhi: London SAGE Publication.
- Dudley-Evans, T. & St. John, M.J. (1998). *Developments in ESP*. Cambridge: Cambridge University Press.
- Gairns, Ruth, and Redman, Stuart. 1987. *Working with Words, A Guide to Teaching and Learning Vocabulary*. Cambridge: Cambridge University Press.
- Grice, Tony. 2003. *Everyday English For Nursing*. 1st Edition. Elsevier. United Kingdom: Oxford bekerjasama dengan Penerbit Buku Kedokteran.
- Harmer, Jeremy, 1991. *The Practice of English Language Teaching*. Third Edition. United Kingdom: Longman.
- Hill, L.A. 2009. *Word Power 1500, 3500 and 45000, Vocabulary Test and Exercise*. Hong Kong: Oxford University Press.
- Hutchinson, Tom, and Waters. 1987. *English for Specific Purposes; A Learning-Centered Approach*. New Direction in Language Teaching. Cambridge: Cambridge University Press.
- Jenkins, Glenn L, 2002. *The Scoville's "The Art of Compounding"*. For Laboratory.
- Jorda, Mary, and Campbell, Suzanne. 2010. *Cognitive and Constructivism, Part II, Educational Implications*. (Online), (<http://www.thirteen.org/edonline/concept2class/constructivism/htm>, accessed on February 2012).
- Keesee, Gayla S. 2012. *Learning Theory and Instructional Design/ Technology*.(Online), (<http://www.ask.Learningtheoryeducation9>, accessed on March 2013).

- Kroeger, Paul R. 2005. *Analyzing Grammar "An Introduction"*. Cambridge: Cambridge University Press.
- Larsen, Diane & Freeman. 2000. *Teaching and Principle in Language Teaching*. Second Edition. United Kingdom: Oxford University Press.
- McKay, Sandra Lee. 2002. *Teaching English as an International Language*. United Kingdom: Oxford University Press.
- Nagy, William E. 1988. *Vocabulary Instruction and Reading Comprehension*. A Technical Report No, 431. Urbana Champaign: University of Illinois.
- Nation, I.S.P. 1990. *Teaching and Learning Vocabulary*. New York: Newbury House Publisher.
- Nation, I.S.P. 2001. *Learning Vocabulary in Another Language*. Cambridge: Cambridge University Press.
- Nation, P. 2003. *The Role of Teaching Vocabulary*. The ASEAN EFL Journal. The EFL Professional's Written Forum. Published Journal.
- Nurbaya, St. 2005. *The Problem Solving in The Lack of Students' Vocabulary Mastery With The Application of Contextual Redefinition*. Semarang: Published thesis IKIP PGRI Semarang and International Conference.
- Oxford, R. L. 1990a. *Language Learning Strategies; What Every Teachers Should Know*. New York: News bury House.
- Piaget, Jean. 2008. *Psychology, Epistemology, and Biology in and Complete Dictionary of Scientific Biography*. (Online), (<http://www.jeanpiagetbiography.html>, accessed on March 2013).
- Richard, Jack C, & Theodore, Rodgers. 1999. *Approaches and Methods in Language Teaching*. Cambridge Language Teaching Library. Cambridge: Cambridge University Press.
- Richard, Jack C and Schmidt, Richard. 2002. *Longman Dictionary of Language Teaching and Applied Linguistics*. Third Edition. Pearson Education Limited Press.
- Richard, Jack C. 2007. *The Role of Vocabulary Teaching*. E-Journal of TESOL Quarterly, Vol. 10. No.1, pp. 77-89. Published Journal by JSTOR. (Online) (<http://www.stor.org/about/terms.html>, accessed on Desember 2012).
- Sugiyono, 2010. *Metode Penelitian Kuantitatif, Kualitatif, dan R & D*. Bandung: Penerbit Alfabeta Bandung Indonesia

- Syamsuddin. 2011. *The Effect of Keeping Vocabulary Notebooks on Vocabulary Acquisition of The students of SMKN 7 WTP*. Makassar: An Unpublished Thesis of Makassar State University.
- Thanasaulas, Dimitrios, 2011. *Constructivist Learning. E-Journal*. (Online), (<http://www.telus.net/linguisticissues/constructivis.html>, Accessed on June 2012).
- Tierney, Robert J. at all. 1990. *Reading Strategies and Practice. A Compendium*. Third Edition. USA: Allyn and Bacon.
- Ullmann, Stephen, 1983. *Semantics an Introduction to the Science of Meaning*. United Kingdom: Oxford Basil Blackwell Press.
- Universitas Hasanuddin (UH). 2004. *Pedoman Penulisan Tesis dan Disertasi Edisi 4*. Makassar: PPS UNHAS press Makassar.
- Ur, Penny. 2009. *A Course in Language Teaching. Practice and Theory*. Cambridge: Cambridge University Press.
- Weda, Sukardi, 2007. *English Learning Strategies*. ISBN 978-979-16734-19. Makassar: LPPMM Press Makassar.
- Wiese, Lee Ann. 2012. *Analysis of Two Vocabulary Strategies; A Study to Indicate Which Strategy, Verbal and Visual Word Association or Contextual Redefinition, is Best Suited for Transferring New Words Into Students' Long Term Memory*. Published Thesis, University of Wisconsin Superior.
- Xia, Jue. 2010. *Communicative Language Teaching in Vocabulary Teaching and Learning in a Swedish Comprehensive Class*. The School of Teacher Education. Kristiansand University.
- _____. *Basic English Vocabulary Level Test*. cited from (Online), (<http://www.englishteststore.net/index>, accessed on March 2013).
- _____. *Cambridge Advance Learner Dictionary the Third Edition (CALD3)*. E-Dictionary. Cambridge: Cambridge University Press.

APPENDIX I PRE TEST WORKSHEET

There are three parts; Definition, Synonym, Word in Context

A. Definition (choose one of the right definition of words below)

1. Back
 - a. To damage severally; to destroy
 - b. A container, usually made of glass, hold liquid
 - c. To do something
 - d. The part behind the front
2. Particle
 - a. Anything that is pleasing and causes happiness
 - b. A very small piece of matter
 - c. In a way not thought possible
 - d. The act of teaching
3. Safe
 - a. The control centre of thought, emotions and body activity of all creatures
 - b. Having little or no light
 - c. Away from harm or danger
 - d. To make two sides or force equals
4. Balance
 - a. A meeting
 - b. Something given without cost
 - c. An instrument that makes a thin, powerful light
 - d. Two make two sides or force equal
5. Advise
 - a. To try to do as well as, or better than, another or other
 - b. To give reason for; to make clear
 - c. To help with information, knowledge or ideas in making a decision
 - d. To try to hear
6. Again
 - a. To say something or to do something that makes another person angry or dishonored
 - b. Another time; as before
 - c. A cloth cover used to keep warm
 - d. The hard material in the body
7. Amount
 - a. To have life; to exist

- b. Used to show that the person or group acting is the one affected by the actor
 - c. Having a thin edge or small point that can cut or hurt; causing hurt or pain
 - d. The number, size or weight of anything
8. Admit
- a. To accept; to express one's guilt or responsibility
 - b. A different or unusual kind; not for general use
 - c. To sit, lie down or sleep to regain strength
 - d. An area of open land, usually used to grow crops or to raise animals.
9. Actor
- a. Someone who pretends to be someone else while performing in a show
 - b. Female actor who Plays a film or cinema
 - c. Causing great fear, terrible which happen to someone who plays in a film or show
 - d. A doll look like a character from a film or television show
10. Attack
- a. A possible explanation why something exist
 - b. A violent attempt to damage, injure or kill
 - c. A soap; To clean of dress
 - d. A good brand of things or food
- B. Synonym** (Find out the synonym of these words)
1. Simple
- | | |
|----------|-------------|
| a. Relax | b. Hard |
| c. Easy | d. Complete |
2. Reply
- | | |
|-------------|-----------|
| a. Know | b. Answer |
| c. Response | d. Call |
3. Silent
- | | |
|------------|----------|
| a. Noise | b. Hear |
| c. Roaming | d. Quiet |
4. Medicine
- | | |
|------------|--------------|
| a. Drug | b. Liquid |
| c. Alcohol | d. Injection |
5. Radiate
- | | |
|---------------|------------|
| a. Spread out | b. Hang on |
| c. Split out | d. Move on |
6. Fast
- | | |
|---------------|-------------|
| a. Number one | b. Party |
| c. Quick | d. Very big |
7. Tiny
- | | |
|----------------|----------|
| a. Made of tin | b. Noisy |
|----------------|----------|

- c. Shining
d. Very small
8. Necessary
a. Loudly
c. Needed
b. Need
d. Not nicely
9. Mend
a. Fix
c. Build
b. Change
d. Prepare
10. Return
a. Come back
c. Shine
b. Go back
d. back

C. Word in Context (fill the gap below by choosing the appropriate words)

1. Another word for college is.....
a. State
c. School
b. University
d. Institute
2. If you want orange, you can.....red and yellow
a. Meet
c. Milk
b. Miss
d. Mix
3. If you are sick, the doctor can give you some
a. Magazine
c. Milk
b. Medicine
d. Money
4. I cannot see the television picture in dentist room. Could youto one side, please?
a. Mouse
c. Move
b. Mouth
d. Movie
5. Andri is ill now. Could you get a..... Please?
a. Dentist
c. Midwife
b. Nurse
d. Doctor
6. The nurse.....sophisticated equipment, temperatures, blood pressures, and respiration rates.
a. Dress
c. Administer
b. Operate
d. Care
7. Consequently, the patient has poor.....and may soon get pressure sores.
a. Lip
c. Vitamin
b. Skin
d. Calcium
8. The doctor was full ofthe way she head chaired the meeting
a. Chance of
c. Access to
b. Emphasis on
d. Administration for
9. The rise in interest has had a considerable.....sales of furniture and kitchen.
a. Effect on
c. Point in
b. Confidence in
d. Interest
10.was first recorded in ancient Egypt in 1500 BC.
a. Diabetes
c. Nurses
b. Hospital
d. Midwife

APPENDIX II POST TEST WORKSHEET

There are five parts; Definition, Synonym, and Word in Context

A. Definition

1. Age
 - a. To work as an official; to be employed by the government
 - b. How old a person or thing is
 - c. To divide or injure with a sharp tool; to make less
 - d. A picture of the earth's surface or a part of it
2. Adult
 - a. A grown person
 - b. Very probable; with good reason to believe
 - c. To reach a goal or thing desired
 - d. Because of; it exchange
3. Young
 - a. In the early years of life
 - b. Nearby, near at
 - c. Old or adult people
 - d. Time or period which is faced by someone
4. Body
 - a. Used in front of a name word to show that is a person or thing
 - b. The normal weather condition of place
 - c. All of a person or animal; the remains of person or animal
 - d. A solid black substance used as fuel
5. Alcohol
 - a. A kind of drinking like; mineral water, tea or coffee
 - b. A strong, calories liquid usually made from grain, use as drug or in an industrial product
 - c. A bad activity, wrong way, or forbidden
 - d. A place for education; a place where people go to learn and get knowledge
6. Accident
 - a. Something goes faster without the expectation of someone
 - b. Something bad which happens that is not expected or misfortune
 - c. A mistake of someone in doing something without
 - d. Industrial disaster

7. Allergy
 - a. A feeling or an action of someone and he/she get mistake
 - b. Food reaction or medicine reaction which happens faster
 - c. A condition that make a person become ill /hypersensitivity
 - d. The treatment or mental illnesses from drug giving
 8. Doctor
 - a. A person with a medical degree
 - b. a person whose job is to care for people who are ill, especially in the hospital
 - c. a person especially women who are trained to help other women when they are giving birth
 - d. a person whose job is treating people's teeth
 9. Award
 - a. To give control or oneself or ones property to another to stop fighting
 - b. An honor or prize for an act or service
 - c. A country, together with its social and political system
 - d. A competition by opposing political candidates seeking support from voters.
 10. Weak
 - a. Having little power; easily broken, damage or destroy
 - b. To question to something is wanted
 - c. An opening for entering or leaving a building or room
 - d. In what way to what amount
- B. Synonym (Find out the synonym of these words)
1. Cheap

a. Price	b. Cost
c. Chief	d. Inexpensive
 2. Fast

a. First	b. Number one
c. Quickly	d. Start
 3. Sick

a. Acne	b. Health
c. Pain	d. Gain
 4. Medication

a. Tools	b. Media
c. Medicine	d. Magazine

5. Food
- | | |
|--------------|--------------------|
| a. Injection | b. Nutrition |
| c. Drink | d. Dinner or lunch |
6. Serious
- | | |
|-----------|-----------|
| a. Clever | b. Greedy |
| c. Severe | d. Solemn |
7. Receive
- | | |
|-----------------|-----------|
| a. Take | b. Arrive |
| c. Prescription | d. Get |
8. Absence
- | | |
|---------|------------|
| a. Lack | b. Lock |
| c. Luck | d. Present |
9. Condition
- | | |
|-------------|-------------|
| a. Agreeing | b. Fighting |
| c. Going on | d. State |
10. Disease
- | | |
|-------------|--------------------|
| a. Illness | b. Not comfortable |
| c. Sickness | d. Unhappy |
- C. Word in Context
- If you leave your ice cream on your plate, it will.....

a. Meal	c. meet
b. Melt	d. milk
 - When Lim left college, he joined a big

a. Country	c. school
b. Capital	d. company
 - I don't like Doctor Joe; he's often rude to people for no.....at all.

a. Reason
b. Return
c. Risen
d. Season
 - Mrs. Lina is a good nurse, she is a smart nurse, and she has a very.....job in one of Makassar famous hospital.

a. Important
b. Invitation
c. Invention
d. Inventory

5. If you mix red and white you get.....
 - a. Pink
 - b. Yellow
 - c. brown
 - d. orange
6. The doctorsmedicines and nurse help administer the treatment
 - a. Diagnose
 - b. Prescribes
 - c. Advise
 - d. Check up
7. They do notmajor operations but perform and assist doctors with small operations done under local anesthetic.
 - a. Assist
 - b. Administer
 - c. Do
 - d. Treat
8. Use two nurses to changes the patient's position every two hours and use draw sheets toas well as removed crumbs if there are any in her bed.
 - a. Adjust
 - b. Straighten
 - c. order
 - d. Level
9. Her skin should be kept clean and dry and patient should have..... every day.
 - a. Shower
 - b. Room
 - c. Injection
 - d. Bed bath
10. The word "diabetes" is Greek and means "fountain" referring to the large amount ofstages.
 - a. Urination
 - b. Urine
 - c. Urinary
 - d. Urinate

APPENDIX III QUESTIONNAIRE

Reg. Number :
 Class :
 Sex :

This questionnaire is designed for research purpose. The information collected to answer the student's attitude toward the use of contextual redefinition strategy on post reading activity and will not be used for another uses. There are no rights or wrong answers. We will appreciate your cooperation and help.

Directions: Please answer each question by ticking the number that can best indicate what you really do while learning English especially for vocabulary subject by using contextual redefinition. Number 1-10 are positive statements and number 11-20 are negative statements. The numbers stand for the following responses.

- 1= I strongly disagree of this statement
- 2= I disagree of this statement
- 3= I fairly disagree of this statement / neutral
- 4= I agree of this statement
- 5= I strongly agree of this statement

No	STATEMENTS	Alternative Answers
1.	The teaching vocabulary is very effective for ESP class like English for Pharmacy class	1 2 3 4 5
2.	I agree if vocabulary teaching for ESP class applies contextual redefinition strategy	1 2 3 4 5
3.	The learning vocabulary by using contextual redefinition strategy is very interesting for me	1 2 3 4 5
4.	Contextual redefinition strategy can improve my vocabulary knowledge well	1 2 3 4 5
5.	I really enjoy in learning vocabulary by using contextual redefinition strategy	1 2 3 4 5
6.	I get new knowledge in application contextual redefinition strategy	1 2 3 4 5
7.	I agree if the teaching English especially for vocabulary subject should apply the contextual redefinition	1 2 3 4 5
8.	Contextual redefinition strategy is very appropriate for teaching and learning vocabulary in general English class and English for specific purposes class	1 2 3 4 5
9.	I agree if the teacher provide reading material for application the contextual redefinition strategy before come to the class	1 2 3 4 5
10.	I guess the meaning of new words by redefine contextually	1 2 3 4 5
11.	It is not effective to teach vocabulary for ESP class	5 4 3 2 1
12.	I disagree if application contextual redefinition strategy in teaching vocabulary in ESP class	5 4 3 2 1
13.	It is not very interesting if learning vocabulary	5 4 3 2 1

.	through contextual redefinition					
14	It doesn't improve my vocabulary knowledge well if application contextual redefinition	5	4	3	2	1
15	It is not enjoyable if learning vocabulary through the contextual redefinition strategy	5	4	3	2	1
16	I didn't get new knowledge if apply contextual redefinition strategy	5	4	3	2	1
17	I disagree if teaching English especially for vocabulary subject is used contextual redefinition	5	4	3	2	1
18	Contextual redefinition strategy is not appropriate for teaching vocabulary in General English Class and ESP class	5	4	3	2	1
19	I disagree if the teacher provide reading material for application the contextual redefinition strategy before come to the class	5	4	3	2	1
20	I didn't guess the meaning of new words by redefine contextually	5	4	3	2	1

APPENDIX IV LESSON PLAN

Teaching Vocabulary for Pharmacy Class in Using Contextual Redefinition Strategy

1. Objectives of the study
In the end of the study, it is expected that students will be able to comprehend, predict and guess the meaning of term by using contextual redefinition strategy
2. Activities
 - a. Preparation
 - Greet the students
 - What are the students expected in learning English?
 - What language aspect is they needed?
 - Ask to the students if they have ever studied Pharmacy terms or vocabulary by using contextual redefinition strategy. How they study of vocabulary? How they can improve their vocabulary? What strategy actually they rarely use in study of vocabulary?
 - Ask to the students to share their strategies or their way of learning English
 - b. Presentation
 - Teacher introduces the new concept and how to guess the meaning or guess the idea of Pharmacy's literatures, then introduce the new strategy. Teacher explains it; about the name, the purpose, the rationale, the description the procedures of this strategy.
 - Teacher gives example of how to use the Chart of CR Strategy and provide the reading material.
 - c. Practice; Students are asked to practice the new strategy into their vocabulary learning
 - d. Evaluation
 - Recheck the students CR chart
 - give a chance to the students to share their idea and comment
 - Students are asked to do self-evaluation through class discussion
 - e. Expansion; Students are asked to relate and transfer strategy use to other task, other activity, and subject area like in the practicum. Teacher will tell them examples of this stage before asking to the students to do it.
3. Closing activity
 - a. Motivating students
 - b. Assignments
 - c. Greetings

APPENDIX V LESSON PLAN

Teaching Vocabulary for Pharmacy Class in Using Conventional Way

1. Objectives of the study

In the end of the study, it is expected that students will be able to comprehend the vocabulary or term from the reading by using conventional way

2. Activities

Preparation

- Greet the students
- What are the students expected in learning English?
- What language aspect is they needed?
- Ask to the students enrich their vocabulary if they want to improve their English well
- Provide reading material and word lists
- Give chance to the students to read text intensively and try to comprehend the idea of reading
- Give chance to the students to address questions related to the text which provided by teacher
- Ask to the students to make a sentences by using the word lists which provided and then memorize them
- Motivating students
- Give Assignments
- Greetings

APPENDIX VI A CONTEXTUAL REDEFINITION LESSON

Five Steps to a Contextual Redefinition Lesson:

1. Select eight to ten words that you want students to learn. (Choose words that are central to understanding the content.)
2. Prior to the lesson, write a sentence for each of the words that will allow the students to accurately define or come up with an approximation of the meaning of the word using clues in the sentence.
3. Present the words in isolation to the students. Have students define the meaning of each of the words. They may have a vague idea, or may only be able to identify an affix, and may even have to make a wild guess
4. Present the words to students in contextually rich sentences in the step 2. After reading the sentences give students the opportunity to go back and revise their definitions.
5. Assign a volunteer to look up each word in the dictionary to verify the correct meaning. (This is an important step and should not be omitted in the process).

A. Prepare to Teach

1. Select words from an appropriate grade-level text passage.
2. Finds a sentence from the text for each word (or create your own) and write it on the board, an overhead transparency, or sentence strip. These sentences should contain enough context clues to enable students to figure out word meanings.

B. Teach

1. Using a chart, share selected words with the students and ask them to say each word, identify how well they know the word, predict a meaning, and explain their prediction. They can work with a partner or whole class. Encourage them to use dictionaries if they need definition clues.
2. Using the prepared sentences, ask students to look at each word in its appropriate context and compare it with its definition. Invite them to make revisions, if necessary. Encourage them to use a dictionary, so they get familiar with it and think of it as a resource. Ask them which clues in the sentence helped them to figure out the meaning.
3. Apply sticky notes to the pages where the words appear. Read the targeted text as students follow along. When they have finished reading and discussing the text, revisit the new words and use context to complete the chart. Invite students to revise or confirm their predictions and to explain how they used the context clues to figure out the words.

APPENDIX VIII

THE EXAMPLES OF READING MATERIALS

17 May 2013

HEALTHY EATING AND VITAMINS by Deborah Lowther (April 18, 2013)

If You Eat Healthy, Does Your Family Need To Take a Multi Vitamin?

There is no question that the best source from which to get your vitamins and minerals is by eating plenty of fresh fruit and vegetables, dairy, grains, protein and omega 3 rich fish. The fact is many families are on the go and busy and quite often the side of vegetables is not served at the drive thru and the only fruit you may get your kids to eat is a glass of orange juice.

Whether or not to take a multi vitamin, or any vitamin, depends on a number of factors. If you eat a well balanced diet that includes fruits, vegetables, fatty fish, dairy, eggs, grains and meat and alternatives then it is likely you don't need an additional source of vitamins. If you are lactose intolerant, your kids are picky eaters, there are food allergies in your family or you are eating on the run more nights than you are sitting at the kitchen table, then there may be health benefits to taking vitamins.

Key Vitamins

This list shows the key nutrients that should be a part of your family diet to maintain optimal health. If you know you are not getting these vitamins on a regular basis, then looking for a multi vitamin that includes this alphabet on its ingredient list may be a good option for your family.

1. **Vitamin A** for eyes, skin and immune system found in mango, sweet potatoes, carrots, spinach, and grapefruit.
2. **Vitamin B** for energy and creating red blood cells found in peas, spinach, sweet potatoes, avocado, bananas and mango.
3. **Vitamin C** for growth and tissue repair and stronger immune system from oranges, red peppers, broccoli, grapefruit and strawberries.
4. **Vitamin D** for strong bones, teeth as well as nerves, muscle and immune systems found in eggs, dairy, chicken, beef and fortified juice and cereals.
5. **Vitamin E** is an antioxidant important to boost your immune system and fight viruses and is found in spinach, blackberries, kiwi and raspberries

6. **Omega 3s** - Protect against heart disease, reduces symptoms of hypertension, depression, attention deficit disorder (ADHD), dementia, and joint pain and boosts immune system. Found in fatty fish such as mackerel, sardines, and salmon and in some fortified eggs and juice.
7. **Fiber** – in addition to preventing constipation it helps lower blood cholesterol, controls blood sugar levels and may also help prevent and treat a variety of diseases and conditions, including heart disease, cancer, diabetes and obesity. Good amounts of fiber are found in peas, apples, pears, grains, barely, and beans.

If you have healthy fruit and vegetable eaters but they don't like fish, then perhaps just an Omega 3 supplement is what is right for your family. Talk to your family doctor to determine if you or your kids need to take a multi vitamin. They will review your typical weekly meal plan to determine what nutrients may be lacking and then look to increase those foods in your diet, or consider a supplement.

Remember, it's the nutrients we need and not artificial coloring, flavors or sweeteners. Read the label carefully for the medicinal and non-medicinal ingredients and choose one that is specially formulated to meet your needs.

Good nutrition for all ages starts with serving a wide variety of whole, fresh foods as much as possible. A good multivitamin act like a backup plan and is a great way to enhance this balanced, healthy diet – not replace it. Including a daily multivitamin alongside fruits and vegetables will help to ensure your family gets all of the vitamins they need to be healthy and active!

VITAMIN

24 Mei 2013

Proteins, fats, carbohydrates and minerals are all essential for life. But there are many other substances the body must have if we are to remain healthy. These substances are called vitamins.

The body needs only tiny amounts of vitamins, and a healthy, balanced diet will include all of these. It is not clear how the body uses most vitamins. What do we know about are results of vitamin deficiency, when not enough are present. Vitamin C, for example, is present in fresh vegetables and fruit, and it seems to be necessary for cell growth known as scurvy, which effected sailors on long voyages, when they where without fresh fruit or vegetables.

There are probably 40 or more vitamins, and essentials for good health. During our entire lives we use only 85 grams (oz) of Vitamin A, and less than 28 grams (1 oz) of thiamine (or Vitamin B 1). Some vitamins can be stored for a while, but others, such as Vitamin C, pass straight out the body in our urine.

Vitamin D is unusual in that it can be made in the skin, by exposure to sunlight. Even so, millions of children around the world suffer Vitamin D deficiency, which causes the bone- distorting disease rickets, (Foods and digestion).

CAPSULES

31 Mei 2013

Capsules are shells of gelatin used for containing individual doses of medicines. It is the purpose of capsules to provide accurate dosage of medication in tasteless form. In this sense, capsules can be considered an elegant pharmaceutical form with the added advantage that the medication can be elected and the amounts varied by the physician to the patient's need. Capsules are swallowed intact as are pills and tablets, although on occasion they may be aqueous liquids to permit a rapid release of its contents. The speed of action can be increased by picking the ends of the capsule with a pin immediately before administration.

There are two forms of capsules-hard capsules, capsule dura, consisting of two closely fitting cylinders, each having closed hemispherical end so fitted together with the closed ends opposite as to provide a reasonably tight covering for the medication, and soft capsule, capsule mole, spherical or ovoid in form, of gelatin rendered more plastic by a greater content of glycerin or other plasticizer. Both kinds are affected by moisture, becoming brittle in very low humidity and becoming soft and advise or liquefied in a high humidity. Capsules should be stored in a cool, dry place, and many filled capsules must be stored in tight containers.

Hard capsule; empty capsule purchased in various sizes by the pharmacist. In compounding prescription for capsules, the ingredients, mostly as powders, are first weighed and mixed according to good pharmaceutical practice. Pharmacist then determines the smallest size of capsules which will adequately contain the amount prescribed for each. In part, this selection of size depends upon trial and error. The filling of capsules is somewhat time-consuming. This labor factor increases the cost of medication in this form. There are two methods for the hand filling of capsules, and each has loyal advocates among pharmacist.

TABLETS

7 Juni 2013

Tablets are solid dosage forms of one or more medicinal agents, with or without diluents. They may be made by compression in a tablet machine, or by molding. Tablets vary greatly in shape, size, and weight, these factors depending to some extent upon the intended use and the weight of the medicinal ingredient contained in each tablet. The accompanying photograph illustrates some of the varieties of tablet forms available. The shape of tablets is limited only by the restrictions of die making. The most common form is disk-shaped with convex surfaces, but special shapes are frequently seen. Some manufactures have developed unusual shapes, such triangular, in order to obtain a distinctive product and to make duplication of their tablet more difficult. Mercury dichloride tablets for antiseptic use, being extremely poisonous, are made coffin-shaped, colored blue, and perhaps, imprinted with skull and crossbones as a warning. Special tablets are oval, triangular, rectangular, hexagonal, ring-shaped, heart –shaped, or one of variety of forms.

Tablets usually are administered orally for a systemic effect or to produce a local effect in the stomach and intestine. They may be flavored wafers to be chewed before swallowing. Other tablets may be held under the tongue to produce a systemic effect or held in the mouth for a local effect in the mouth or in the throat. Tablet may be dissolved the solutions to be swallowed, injected, or used locally as an eye drop, collieries, spray, gargle, douche, location, or bath. Tablets are marketed for preparing test solutions, buffered solutions, stains for microscopic work, and nutrient media for the cultivation of microorganisms.

Tablet prescriptions, tablets are dispensed preferably in glass vials or bottles appropriate in size to the number of tablets prescribed. In general, amber or green-colored containers are is that modern vials tablet from light. Another reason for choosing glass containers is that modern vials and bottles are fitted with a screw cap so that the container can be sealed tightly to protect the contents from air and moisture.

14 June 2013

Drug and Medication

Medication is a serious matter. You should understand them fully before you agree to take them. Many doctors make it a policy to explain the benefits and possible side effects of drug therapy before writing a prescription. If your doctors do it, you needn't read any further. Ask your doctors these eight questions before you accept any written prescription.

- What is the generic and the trade name of this drug
- How strong is it?

- Why do you think I should take this drug are sure it will interact positively with the other medication I am thinking?
- How do you recommend I take this drug? (for example; with meals or on an empty stomach? With water or juice?)
- What side effect should I be watching out for? Should I report them to you right away or wait until our next visit.
- Are there any activities such as driving a car or operating machine – that I should not do while taking this drug?
- How long do I have to take this drug?

Medication labeling and storage tips

Before leaving a pharmacy, make sure that a prescription's label contains the following items;

- ❖ The pharmacy's name, address, and phone number
- ❖ Your name spelled correctly
- ❖ The prescription number
- ❖ Direction about how much of the drug to take and when
- ❖ Expiration date, if applicable
- ❖ Your prescribing doctor's name
- ❖ Any special storage instruction

Proper storage is important. Medication that isn't handled correctly can lose their effectiveness. In addition to heeding the drug the drug manufacture's or your pharmacy's instruction, keep in mind the following storage tips;

- 📌 Bathroom often humid, so don't store medication there, find a storage place in a room where humidity is low
- 📌 Store all medication in their original containers with the labels securely affixed
- 📌 Never combine different tablets or capsules in the same container, even to make it easier to carry them in your pocket or purse, or when you are travelling.
- 📌 If necessary, ask your pharmacist for smaller labeled containers that are easier to carry around
- 📌 Don't put medicines in car glove compartment. And don't leave them on an windowsill or anywhere they are exposed to direct sunlight
- 📌 All medicine should be kept well out of children's reach

ARE VITAMIN SUPPLEMENTS SAFE?

by Dallas Cloutre, PhD

Anyone who recently has been reading the major newspapers, surfing for news on the Internet or just watching the news on television likely has been surprised by the claim that “vitamins are deadly.” The *Wall Street Journal* (October 25, 2011) asks, “Is This the End of Popping Vitamins?” And the *Archives of Internal Medicine* just published “Dietary Supplements and Mortality Rate in Older Women,” an article that comes to the conclusion that “in older women, several commonly used dietary vitamin and mineral supplements may be associated with increased total mortality risk.” A second study published in the *Journal of the American Medical Association*, (JAMA) claims that men who take vitamin E are at higher risk of developing prostate cancer. What is to be made of such claims? Are they true, false, or something in between? How can the non-expert decide?

Dangerous Multivitamins

“Dietary Supplements and Mortality Rate in Older Women: The Iowa Women’s Health Study” at first appears to be a large and well-laid out study. As the study describes its own design, “We assessed the use of vitamin and mineral supplements in relation to total mortality in 38,772 older women in the Iowa Women are Health Study; mean age was 61.6 years at baseline in 1986. Supplement use was self-reported in 1986, 1997, and 2004.” It reports that a number of nutrients supposedly are linked to greater rates of death in vitamin users than in non-users. There was an associated increased risk of total mortality when compared with corresponding non-use for multivitamins, vitamin B6, folic acid, iron, magnesium, zinc and copper. Indeed, of 15 supplements analyzed by the researchers, only calcium was associated with a lower risk of mortality.

How reliable is this study and its conclusions? Not very. Many have criticized the publication vigorously as being highly misleading for reasons easy to grasp. Here are some of the concerns that have been expressed:

- This was only an observational study based on self-reporting via questionnaires and not a study establishing cause and effect.
- No attempt was made to assess the accuracy of self-reporting. As is well known from highly controlled clinical trials, many individuals will recall and report usage when they in fact are recalling and reporting

their intentions. The authors cannot say whether the recall statistics were 90 percent accurate or only 50 percent accurate or varied by the supplement being taken.

- No attempt was made to independently assess the relative health of the participants or link such information to the vitamin usage. No attempt was made and there is no information on the actual nutrient status of the participants.
- Those who took vitamins at the beginning of the study reported being significantly healthier than those who did not, i.e., less hypertension, less diabetes, etc. This means that comparing those taking vitamins and those not taking vitamins was not comparing apples to apples, but potentially comparing apples to oranges because of a host of traits and conditions that might have separated these groups from the start.
- To assess the impact of vitamin usage, statistical modeling was used to remove factors that supposedly might skew the results. This modeling is highly controversial.

The statistical manipulation of the data is the worst offense of the authors of this study and it primarily is through this manipulation that they reached their negative conclusions. The authors adjusted all the numbers for “age, educational level, place of residence, diabetes mellitus, high blood pressure, body mass index (calculated as weight in kilograms divided by height in meters squared), waist to hip ratio, hormone replacement therapy, physical activity, smoking status, and intake of energy.” The results were further manipulated via yet more “multivariable adjustment” to take into account alcohol, saturated fatty acids, whole grain products, fruits, and vegetables.

It is important to understand the impact of these adjustments. Bear in mind that the women being surveyed who took supplements before the start of the study were healthier than those who did not. Jacob Teitelbaum, MD, a holistic physician and coauthor of *Real Cause, Real Cure* (Rodale, 2011), has provided an excellent analogy of how the authors of the *Archives of Internal Medicine* study biased the results via their statistical adjustments: “One could come to the same conclusion about exercise not being helpful using this same statistical approach. Take, for example a study with two control groups: those who exercise and those who do not, but both of which are put on a new exercise program. At the beginning of the study, those who already are exercisers are healthier than those who are not. By canceling this fact out, and negating the prior health of the exercisers, you can find that exercise is not beneficial.” Teitelbaum’s point is that the better health of the already exercising group may not be greatly improved by merely changing the exercise program, whereas the health of the non-exercisers will be enhanced. If the benefits of the prior exercise of the first group are subtracted from the results and then the two groups are

compared, it will make prior exercise appear to be bad for health inasmuch as the prior exercise group's health will not have improved during the course of the trial compared to the newly exercising group.

So the *Archives of Internal Medicine* researchers “controlled” for good health habits and for good health at the start of the observational period. Their adjustments subtracted the starting health status of the vitamin users just as in Teitelbaum's exercise analogy. As Teitelbaum astutely observes, “The hypothesis wasn't to state whether supplements will harm or help. It was to see if they would harm, which gives you an idea of what their study was about.”

How powerful are these adjustments, i.e., statistical manipulations? Very. Consider the actual raw findings reported in Table 2 of the study:

- Vitamin B complex was associated with a 7 percent reduction in mortality
- Vitamin C was associated with a 4 percent reduction in mortality
- Vitamin D was associated with an 8 percent reduction in mortality
- Magnesium was associated with a 3 percent reduction in mortality
- Selenium was associated with a 3 percent reduction in mortality
- Zinc was associated with a 3 percent reduction in mortality

This is not to say that all nutrients were good—for instance, copper was associated with a 31 percent increase in mortality and this negative finding well may be accurate because of the known dangers of copper overload—but the statistical adjustments significantly reversed most of the findings of the non-adjusted data. This should give one serious pause in accepting the study and its conclusions.

In short, this study would appear to be an unreliable guide to the benefits of supplements, especially multivitamin and mineral formulas. A large number of published studies, in fact, have found just the opposite, to wit, multivitamin/ mineral intake and the intake of a number of individual nutrients is associated with improved health. Here are the conclusions of just one of these studies, a study much more rigorous than that just examined: “These results indicate that use of supplements significantly improved the status of several vitamins in elderly people. Due to age-related problems concerning the intake and digestion of nutrients, a moderate, regular supplementation might be a useful option for older people who are otherwise unable to satisfy their micronutrient requirements.”

APPENDIX IX
THE RESULT OF STUDENTS' PRE-TEST FOR TREATMENT
GROUP "MIPA A CLASS"

No	Name	Initial	Pre- test score	Classification
1.	TS	Student MIPA A 1	23	Very poor
2.	LS	Student MIPA A 2	23	Very poor
3.	FD	Student MIPA A 3	53	Poor
4.	NA	Student MIPA A 4	20	Very poor
5.	NY	Student MIPA A 5	40	Very poor
6.	AT	Student MIPA A 6	26	Very poor
7.	BM	Student MIPA A 7	23	Very poor
8.	IW	Student MIPA A 8	23	Very poor
9.	MK	Student MIPA A 9	33	Very poor
10.	FD	Student MIPA A 10	23	Very poor
11.	UH	Student MIPA A 11	40	Very Poor
12.	RS	Student MIPA A 12	26	Very poor
13.	WOW	Student MIPA A 13	66	Acceptable
14.	RW	Student MIPA A 14	23	Very poor
15.	AN	Student MIPA A 15	23	Very poor
16.	SW	Student MIPA A 16	36	Very poor
17.	FH	Student MIPA A 17	60	Acceptable
18.	YK	Student MIPA A 18	30	Very poor
19.	NF	Student MIPA A 19	36	Very poor
20.	HD	Student MIPA A 20	40	Very poor
21.	SBN	Student MIPA A 21	36	Very poor
22.	RJU	Student MIPA A 22	56	Poor
23.	RA	Student MIPA A 23	43	Very poor
24.	AA	Student MIPA A 24	46	Very poor
25.	MG	Student MIPA A 25	26	Very poor
26.	DIK	Student MIPA A 26	20	Very poor
27.	RYN	Student MIPA A 27	40	Very poor
28.	NS	Student MIPA A 28	60	Acceptable
29.	WH	Student MIPA A 29	36	Very poor
30.	MT	Student MIPA A 30	73	Good
	Total Score		1103	
	Mean Score		36, 7	

APPENDIX XI
THE RESULT OF STUDENTS' POST-TEST FOR TREATMENT
GROUP "MIPA A CLASS"

No	Name	Initial	Post test' scores	Classification
1.	TS	Student MIPA A 1	53, 4	Poor
2.	LS	Student MIPA A 2	50	Poor
3.	FD	Student MIPA A 3	73, 4	Good
4.	NA	Student MIPA A 4	40	Very poor
5.	NY	Student MIPA A 5	60	Acceptable
6.	AT	Student MIPA A 6	56, 7	Poor
7.	BM	Student MIPA A 7	53, 4	Poor
8.	IW	Student MIPA A 8	40	Very poor
9.	MK	Student MIPA A 9	56, 7	Poor
10.	FD	Student MIPA A 10	36	Very poor
11.	UH	Student MIPA A 11	56, 7	Poor
12.	RS	Student MIPA A 12	50	Poor
13.	WOW	Student MIPA A 13	60	Acceptable
14.	RW	Student MIPA A 14	43	Very poor
15.	AN	Student MIPA A 15	43	Very poor
16.	SW	Student MIPA A 16	63, 4	Acceptable
17.	FH	Student MIPA A 17	63, 4	Acceptable
18.	YK	Student MIPA A 18	50	Poor
19.	NF	Student MIPA A 19	50	Poor
20.	HD	Student MIPA A 20	43	Very poor
21.	SBN	Student MIPA A 21	63,4	Acceptable
22.	RJU	Student MIPA A 22	50	Poor
23.	RA	Student MIPA A 23	63, 4	Acceptable
24.	AA	Student MIPA A 24	46	Very poor
25.	MG	Student MIPA A 25	63, 4	Acceptable
26.	DIK	Student MIPA A 26	26	Very poor
27.	RYN	Student MIPA A 27	70	Good
28.	NS	Student MIPA A 28	70	Good
29.	WH	Student MIPA A 29	53, 4	Poor
30.	MT	Student MIPA A 30	76, 7	Good
	Total Score		1618	
	Means Score		53, 9	

APPENDIX XII

THE RESULT OF PRE-TEST SCORE FOR CONTROL GROUP “MIPA C CLASS”

No	Name	Initials	Pre- Test Score	Classification
1.	JW	Students MIPA C 1	30	Very poor
2.	AG	Students MIPA C 2	30	Very poor
3.	NI	Students MIPA C 3	70	Good
4.	KD	Students MIPA C 4	33	Very poor
5.	ERS	Students MIPA C 5	26	Very poor
6.	WD	Students MIPA C 6	36	Very poor
7.	DH	Students MIPA C 7	13	Very poor
8.	NW	Students MIPA C 8	63	Acceptable
9.	JJ	Students MIPA C 9	33	Very poor
10.	NG	Students MIPA C 10	50	Poor
11.	KT	Students MIPA C 11	36	Very poor
12.	ND	Students MIPA C 12	26	Very poor
13.	HD	Students MIPA C 13	56	Poor
14.	PS	Students MIPA C 14	30	Very poor
15.	NF	Students MIPA C 15	43	Very Poor
16.	RW	Students MIPA C 16	43	Very Poor
17.	RY	Students MIPA C 17	43	Very Poor
18.	YAY	Students MIPA C 18	50	Poor
19.	WN	Students MIPA C 19	56	Poor
20.	NS	Students MIPA C 20	60	Acceptable
21.	HLA	Students MIPA C 21	40	Very poor
22.	AFW	Students MIPA C 22	43	Very poor
23.	LL	Students MIPA C 23	60	Acceptable
24.	MS	Students MIPA C 24	33	Very poor
25.	DE	Students MIPA C 25	33	Very poor
26.	KM	Students MIPA C 26	26	Very poor
27.	HB	Students MIPA C 27	53	Poor
28.	EM	Students MIPA C 28	40	Very poor
29.	RJ	Students MIPA C 29	63	Acceptable
30.	NT	Students MIPA C 30	56	Poor
	Total Score		1274	
	Mean Score		42.46	

APPENDIX XII

THE RESULT OF POST TEST SCORE FOR CONTROL GROUP “MIPA C CLASS”

No	Name	Initials	Post- test score	Classification
1.	JW	Students MIPA C 1	40	Very poor
2.	AG	Students MIPA C 2	36	Very poor
3.	NI	Students MIPA C 3	73	Good
4.	KD	Students MIPA C 4	36	Very poor
5.	ERS	Students MIPA C 5	46	Very poor
6.	WD	Students MIPA C 6	33	Very poor
7.	DH	Students MIPA C 7	43	Very poor
8.	NW	Students MIPA C 8	63	Acceptable
9.	JJ	Students MIPA C 9	33	Very poor
10.	NG	Students MIPA C 10	53	Poor
11.	KT	Students MIPA C 11	50	Poor
12.	ND	Students MIPA C 12	50	Poor
13.	HD	Students MIPA C 13	56	Poor
14.	PS	Students MIPA C 14	60	Acceptable
15.	NF	Students MIPA C 15	53	Poor
16.	RW	Students MIPA C 16	63	Acceptable
17.	RY	Students MIPA C 17	63	Acceptable
18.	YAY	Students MIPA C 18	30	Very poor
19.	WN	Students MIPA C 19	53	Poor
20.	NS	Students MIPA C 20	56	Poor
21.	HLA	Students MIPA C 21	30	Very poor
22.	AFW	Students MIPA C 22	50	Acceptable
23.	LL	Students MIPA C 23	63	Acceptable
24.	MS	Students MIPA C 24	50	Poor
25.	DE	Students MIPA C 25	43	Very poor
26.	KM	Students MIPA C 26	43	Very poor
27.	HB	Students MIPA C 27	23	Very poor
28.	EM	Students MIPA C 28	63	Acceptable
29.	RJ	Students MIPA C 29	66	Acceptable
30.	NT	Students MIPA C 30	33	Very poor
	Total Score		1454	
	Mean Score		48, 46	

APPENDIX X
THE RESULT OF T-Test

Paired Samples Statistics

	Mean	N	Std. Deviation	Std. Error Mean
Pair 1 Control pre	42.4667	30	13.88806	2.53560
Control post	48.4667	30	12.87803	2.35120
Pair 2 Pre-test for Treatment	36.7667	30	14.79208	2.70065
Post-test for Treatment	54.1467	30	11.66598	2.12991

Paired Samples Correlations

	N	Correlation	Sig.
Pair 1 Pre test for Control & post test for Control	30	.406	.026
Pair 2 Pre-test for Treatment & Post-test for Treatment	30	.658	.000

Paired Samples Test

		Paired Differences		
		Mean	Std. Deviation	Std. Error Mean
Pair 1	Control pre - Control post	-6.00000	14.61223	2.66782
Pair 2	Pre-test for Treatment - Post-test for Treatment	-17.38000	11.30466	2.06394

Paired Samples Test

		Paired Differences	
		95% Confidence Interval of the Difference	
		Lower	Upper
Pair 1	Pre test for Control – Post test for Control	-11.45630-	-.54370-
Pair 2	Pre-test for Treatment - Post-test for Treatment	-21.60123-	-13.15877-

Paired Samples Test

		t	df	Sig. (2-tailed)
Pair 1	Pre test for Control – Post test for Control	-2.249-	29	.032
Pair 2	Pre-test for Treatment - Post-test for Treatment	-8.421-	29	.000

N Par Tests**Descriptive Statistics**

	N	Mean	Std. Deviation	Minimum	Maximum
Control pre	30	42.4667	13.88806	13.00	70.00
Pre-test for Treatment	30	36.7667	14.79208	20.00	73.00
Control post	30	48.4667	12.87803	23.00	73.00
Post-test for Treatment	30	54.1467	11.66598	26.00	76.70

Wilcoxon Signed Ranks Test

Ranks

		N	Mean Rank	Sum of Ranks
Control post - Control pre	Negative Ranks	7 ^a	13.79	96.50
	Positive Ranks	20 ^b	14.08	281.50
	Ties	3 ^c		
	Total	30		
Post-test for Treatment - Pre-test for Treatment	Negative Ranks	2 ^d	5.00	10.00
	Positive Ranks	27 ^e	15.74	425.00
	Ties	1 ^f		
	Total	30		

- a. Control post < Control pre
b. Control post > Control pre
c. Control post = Control pre
d. Post-test for Treatment < Pre-test for Treatment
e. Post-test for Treatment > Pre-test for Treatment
f. Post-test for Treatment = Pre-test for Treatment

Test Statistics^b

	Control post - Control pre	Post-test for Treatment - Pre-test for Treatment
Z	-2.229 ^a	-4.490 ^a
Asymp. Sig. (2-tailed)	.026	.000

- a. Based on negative ranks.
b. Wilcoxon Signed Ranks Test

Frequencies

Statistics

		Control pre	Control post	Pre-test for Treatment	Post-test for Treatment
N	Valid	30	30	30	30
	Missing	0	0	0	0
	Mean	42.4667	48.4667	36.7667	54.1467
	Std. Error of Mean	2.53560	2.35120	2.70065	2.12991
	Median	41.5000	50.0000	36.0000	53.4000
	Mode	33.00 ^a	63.00	23.00	50.00 ^a
	Std. Deviation	13.88806	12.87803	14.79208	11.66598
	Range	57.00	50.00	53.00	50.70
	Minimum	13.00	23.00	20.00	26.00
	Maximum	70.00	73.00	73.00	76.70

- a. Multiple modes exist. The smallest value is shown

Frequency Table

Pre-test for Treatment

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	20.00	2	6.7	6.7	6.7
	23.00	7	23.3	23.3	30.0
	26.00	3	10.0	10.0	40.0
	30.00	1	3.3	3.3	43.3
	33.00	1	3.3	3.3	46.7
	36.00	4	13.3	13.3	60.0
	40.00	4	13.3	13.3	73.3
	43.00	1	3.3	3.3	76.7
	46.00	1	3.3	3.3	80.0
	53.00	1	3.3	3.3	83.3
	56.00	1	3.3	3.3	86.7
	60.00	2	6.7	6.7	93.3
	66.00	1	3.3	3.3	96.7
	73.00	1	3.3	3.3	100.0
	Total	30	100.0	100.0	

Post-test for Treatment

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	26.00	1	3.3	3.3	3.3
	36.00	1	3.3	3.3	6.7
	40.00	2	6.7	6.7	13.3
	43.00	3	10.0	10.0	23.3
	46.00	1	3.3	3.3	26.7
	50.00	5	16.7	16.7	43.3
	53.40	3	10.0	10.0	53.3
	56.70	3	10.0	10.0	63.3
	60.00	2	6.7	6.7	70.0
	63.40	5	16.7	16.7	86.7
	70.00	2	6.7	6.7	93.3
	73.40	1	3.3	3.3	96.7
	76.70	1	3.3	3.3	100.0
	Total	30	100.0	100.0	

APPENDIX XIV

THE FREQUENCY OF POSITIVE STATEMENTS

NO	STATEMENTS	ALTERNATIVE ANSWERS				
		1	2	3	4	5
		SD	D	N	A	SA
1.	The teaching vocabulary is very effective for (English for Specific Purposes) ESP class like my class	-	1	5	22	2
2.	I agree if teaching vocabulary for ESP class applies contextual redefinition strategy	1	2	2	19	7
3.	The learning vocabulary by using contextual redefinition strategy is very interesting for me	1	-	3	17	9
4.	Contextual redefinition strategy can improve my vocabulary knowledge well	-	2	1	20	7
5.	I really enjoy in learning vocabulary by using contextual redefinition strategy	-	1	5	10	14
6.	I get new knowledge in application contextual redefinition strategy	-	-	6	20	4
7.	I agree if the teaching English especially for vocabulary subject should apply the contextual redefinition	-	1	4	15	10
8.	Contextual redefinition strategy is very appropriate for teaching and learning vocabulary in general English class and English for specific purposes class	-	1	4	19	6
9.	I agree if the teacher provide reading material for application the contextual redefinition strategy before come to the class	-	2	1	16	11
10.	I guess the meaning of new words by redefine contextually	1	3	3	16	7

APPENDIX XV

THE FREQUENCY OF NEGATIVE STATEMENTS

NO	STATEMENTS	ALTERNATIVE ANSWERS				
		5	4	3	2	1
		SD	D	N	A	SA
11.	It is not effective to teach vocabulary for ESP class	5	7	11	5	2
12.	I disagree if application contextual redefinition strategy in teaching vocabulary in ESP class	7	11	6	5	1
13.	It is not very interesting if learning vocabulary through contextual redefinition strategy	8	11	7	4	-
14.	It doesn't improve my vocabulary knowledge well if application contextual redefinition	13	8	8	-	1
15.	It is not enjoyable if learning vocabulary through the contextual redefinition strategy	9	12	5	3	1
16.	I didn't get new knowledge if apply contextual redefinition strategy	10	8	9	1	2
17.	I disagree if teaching English especially for vocabulary subject is used contextual redefinition	10	13	5	2	-
18.	Contextual redefinition strategy is not appropriate for teaching vocabulary in General English Class and ESP class	7	12	5	4	2
19.	I disagree if the teacher provide reading material for application the contextual redefinition strategy before come to the class	7	15	8	-	-
20.	I didn't guess the meaning of new words by redefine contextually	8	9	8	5	-

APPENDIX XVI

THE STUDENTS' WORKS

CURRICULUM VITAE

Andi Samsurijal was born on 13th March 1982 in Pattiro Bajo-Bone Regency. He is the second son of Andi Nuralang and the late Andi Muliati. He started his formal education at Kindergarten until Senior High School in his birth land. He graduated from SD N 221 Pattiro Bajo-Bone in 1994. In the same year, he continued his study in SMP N 1 Pattiro Bajo-Bone and graduated in 1997. He studied at SMU N 1 Sibulue-Bone and graduated in 2000.



After graduated his study in Senior High School, he worked at Citatah Ltd as Machine Socomac operator. In 2004 he decided to continue his study in Makassar Islamic University at Faculty of Letters and graduated in 2008. Soon after graduate, he worked there as academic staff while teaching General English as lecture assistant from 2008 until the middle of 2013. He was teaching English also in MTs Insan Unggul Makassar since 2006 until 2013. In 2011 he got recommendation from the Rector of Makassar Islamic University to continue his study and scholarship. He chose English Language Studies, Post Graduate Program of Hasanuddin University.

In the first semester, he got married with Muthmainnah, unfortunately in 2012 he got a baby but he was died in his fourth month. Now he worked as academic staff of Mathematics and Natural Sciences Faculty of Makassar Islamic University. While he worked as a staff he also taught English in some of private school and he built up an institution of English Education and Training named "GAU ASE".